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## PREFACE.

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THE intention of this book is to supply an elementary exposition of the practice and principles of Landscape-drawing, expressed in language as plain and free from technicalities as the nature of the subject will allow.

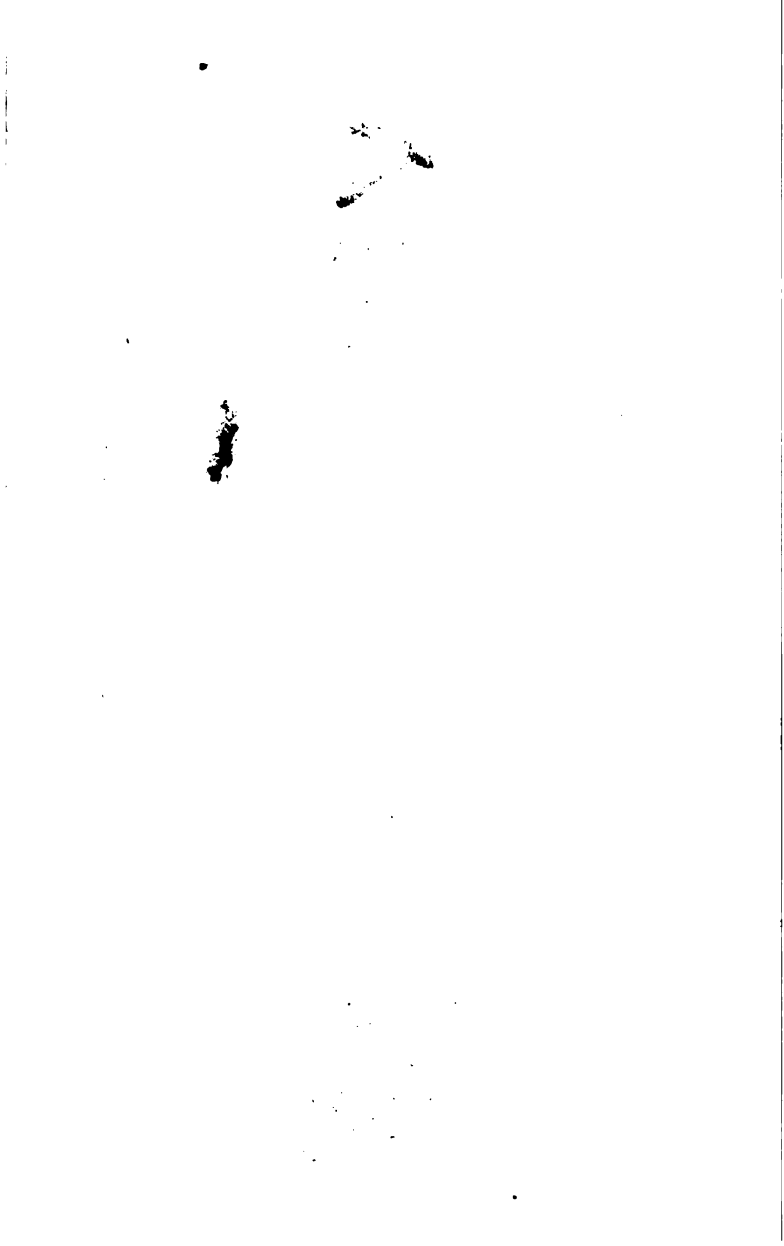
Throughout, the aim has been to explain the nature of general subjects, and the principles on which their delineation is based ; shewing the nature of real drawing as opposed to mere mechanical imitation, enabling the pupil to represent with correctness and decision points of character and design which he might otherwise entirely overlook, and ultimately to apply the experience of early study to original drawings of his own.

As it is a difficult matter to incorporate without confusion the subject of Perspective with remarks on any other branch of drawing, it has been placed at the beginning in a distinct form, to be referred to as occasion requires.

It should also be understood, that the various wood-cuts introduced are rather meant to illustrate the text, and serve as guides to the pupil, than as examples to be copied.

In conclusion, it is to be hoped this little work may contribute in some degree towards advancing this important study—one most agreeable in itself, refining the taste, elevating the imagination, and enlarging the sphere of happiness and enjoyment, by increasing the perception of the many beauties of nature, and the appreciation of the refinements of art.

EDINBURGH, *September 1857.*



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## SECOND BOOK OF DRAWING.

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### PRELIMINARY.

**THE** art of Drawing may be divided into three distinct branches—namely, the training of the hand, or manipulation ; the education of the eye ; and the cultivation of the mind.

The first of these—the training of the hand—is of great importance, as it is the only means of giving expression to the other qualifications : if it is neglected, the style will be proportionally weak and unnatural ; but if carefully acquired, with a due reference to nature, it will be free, decided, and effective. It will also be found that, on commencing any of the various branches of study, the necessary manipulation is the first thing to be acquired, so as to leave the mind perfectly free to obtain a knowledge of the character, and to study the effect of the subject.

The education of the eye is a technical expression, by which is understood the cultivation of the judgment in reference to the various qualities of Form, Light and Shade, and Colour. In form, it means a thorough knowledge of what is horizontal, vertical, or oblique ; of what is straight, curved, or crooked ; it comprises also a thorough appreciation of proportion, the magnitude and relation of one line or form with another. In light and shade, and colour, it has reference to the ready appreciation of the various tints, degrees of gradation, and general effect.

The cultivation of the mind in drawing includes a wide range of subject ; but in early studies, it comprises principally a knowledge of the different subjects represented, in all their various qualities. For example, in the drawing of trees, it includes a knowledge of the peculiar distinctive characteristics of foliage, stems, and branches—how these are affected by perspective and light and shade ; it embraces also the knowledge of the rules of drawing and perspective.

It is of importance that the student should be aware of these distinctions, for it will be found that little progress can be made unless they are equally included in study. To make a satisfactory drawing of the simplest form of a rustic cottage, requires a hand trained to the necessary manipulation, with judgment enough to observe the effects of perspective, and the proportions and position of the parts in relation to each other, together with a knowledge of the construction and character of the whole. The same is true of every subject which may be studied; otherwise, it will be simply a mechanical useless result. Mere copying is not drawing; years are often thus spent unprofitably, and disappointment is the invariable consequence.

If any one of these branches is neglected, the others are sure to suffer in proportion: if manipulation be not duly acquired, the drawings will be feeble, timid, and unpleasing; if the education of the eye be neglected, the style will be loose and erroneous; and if the mind is not sufficiently informed, the drawings will be lifeless and mechanical.

These remarks, however, are made chiefly with a view to indicate what we consider a proper method of study, such as will result with benefit to the pupil. It is not to be imagined that these acquirements are essential, in order to begin drawing; indeed, the pupil may at first know nothing whatever about them, the first lessons requiring merely a little ordinary care and attention. What we are most anxious to impress on the mind of the beginner is, that drawing is not mere copying. Many go through what is considered a course of drawing, imitating mechanically what is set before them; yet when called upon to make a sketch of any simple object from memory, it is found that they are utterly unable to do it. Drawing, in fact, is learning; whatever is drawn, must be known, and that thoroughly. A good drawing should present a certain amount of information to the pupil, which should be studied like any other lesson. After a proper course of study from the drawings of eminent artists, the pupil will have obtained a certain amount of benefit from their experience, and will be enabled to go to nature and acquire new ideas of his own.

## PERSPECTIVE.

1. PERSPECTIVE is the method by which objects are represented on any flat surface, as a sheet of paper, so that they suggest the true appearance of nature to the eye. It is the basis of the art of drawing, training the eye to discern the perspective effects of nature, and giving facility and correctness in their representation.

2. The perspective appearance of objects in nature is, of course, independent of drawing altogether, and may be studied by itself; and as a knowledge of it is of great use in the first drawing-lessons, enabling the pupil to note the sloping of the various lines as they recede, and to draw them correctly, we will notice the perspective of nature first, then the methods used in its relation to art.

3. Every one must have noticed, that as objects retire from the eye, they appear to diminish. People walking in a street appear less and less the further they recede, so that at a mile distant they become mere specks. Trees in the landscape are very large when close by, but seen a few miles off, appear very little. The reason of this may be found from the adjoining diagram. AB and

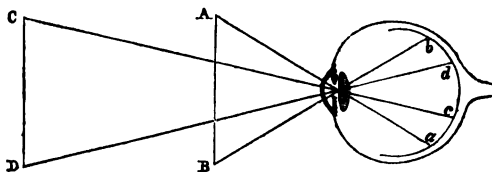


Fig. 1.

CD represent two objects at different distances from the

eye. Lines drawn from their extremities to the retina shew the difference in magnitude of the pictures of them formed there: *cd* represents *CD*; and the space between *ab*, *AB*. It will be seen that *AB* has a picture nearly double in size of that formed by *CD*; that is, it would appear so to the eye.

4. It will be observed that the lines or rays proceeding to the eye from *AB*, slope more than those from *CD*; hence they are said to be at a greater angle than those of *CD*; and if *CD* were further removed, the lines would in proportion slope still less: hence, as objects recede from the eye, they are said to be seen under a lesser angle. If we look straight along a street, the horizontal lines of the buildings and pavement appear to contract and tend towards a point immediately opposite to the eye. Those below the level of the eye, as the lines of the pavement and base-lines of the buildings, tend upward, as *AP*, *BP*, fig. 2. Those above the eye, as the horizontal portions of

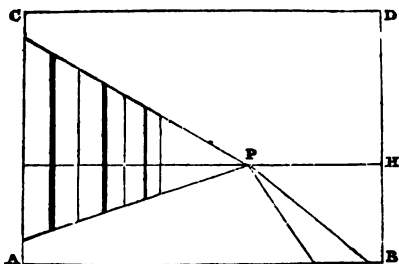


Fig. 2.

doors, windows, chimneys, &c., and the eaves of the buildings, tend downward, as *CP*. The upward and converging tendency may be very distinctly observed in the long receding lines of the rails on a railway. As a general rule, all level or horizontal lines appear to converge and terminate in the horizon, or horizontal line, as it is called in perspective, the particular point in which they terminate being determined by their relative position.

5. The question naturally arises, why do lines appear to

tend to, and terminate in a point? The reason will be observed from the accompanying diagram. AB, we will suppose, represents the eaves of a house, and E the

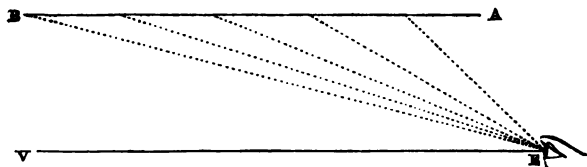


Fig. 3.

position of the eye in relation to it. It will be observed that lines drawn from various points in AB to the eye, slope less and less as they recede; and it is obvious that, if AB were infinitely extended, the lines would continue to slope less and less, until they became apparently parallel with EV. They could never come to the eye below EV, because it is parallel with AB, and parallel lines never meet, although infinitely produced. Hence all the lines or rays from AB, infinitely produced, would pass between EV and AB; and AB is said to *vanish*, or cease to appear to the eye in a line, EV, passing through the eye parallel to it.

6. The same is true of lines that slope, as those of the roofs of buildings; these also converge; and it is necessary in copying drawings, when such occur, to note the amount of convergence. Most students are apt to overlook this, and draw them strictly parallel, which is quite true of them as they really are, but not as they appear.

7. If a book, a box, or other rectangular object be placed on a table, with two of the sides parallel with the position of the spectator, it will be noticed that the lines at right angles to him converge to a point immediately opposite the eye, as CF and DF to P, fig. 4. The object in this position is said to be in *parallel perspective*. A good

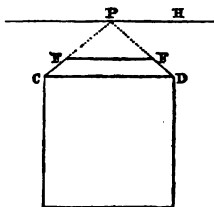


Fig. 4.

idea of parallel perspective may be obtained by standing at the end of a rectangular room, with the back placed flat against one of the end-walls: the lines of side-walls at the roof and floor, proceed at right angles from the spectator, and tend to a point immediately opposite to the eye, as in fig. 5.

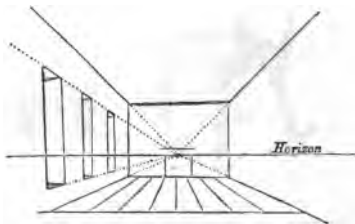


Fig. 5.

8. But if the back be placed in one of the corners of the room, the lines will not meet opposite to the eye as before, but will converge to points in the horizontal line to the right and left of the position. These will all be inclined

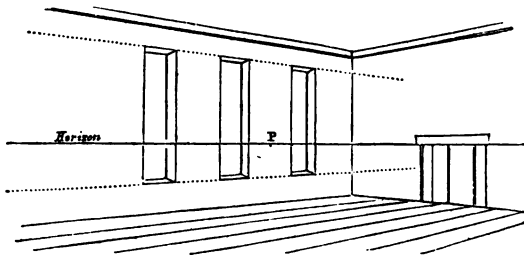


Fig. 6.

to the spectator, as in fig. 6, and hence are said to be in *angular perspective*.

9. Fig. 7 is a further example of parallel and angular perspective.

10. It is not enough, however, merely to know what parallel and angular perspective are; they must be known in all their various effects to be of any practical utility. The

pupil should familiarise himself with the various different appearances which a single object, as a box or a book, may

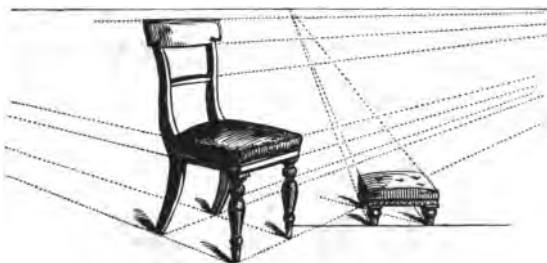


Fig. 7.

be made to assume by being placed in different positions ; for example, a book with its back parallel to the spectator, held immediately before and on a level with the eye, will appear as *d*, fig. 8, the back alone being visible. If held

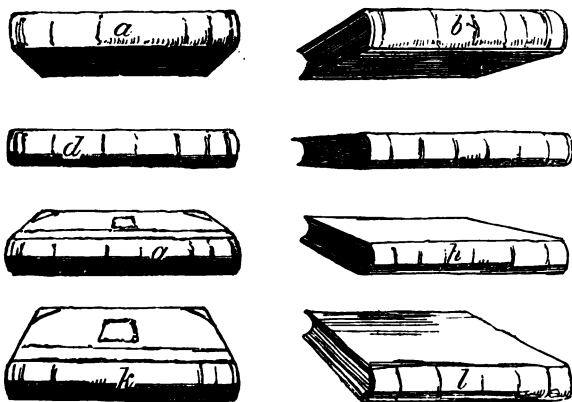


Fig. 8.

a little to the right, a portion of one of the edges will be visible, as *e* ; held above the eye, it will appear as *a* or *b* ;

and if below, as *g* or *h*; and lower still, as *k* or *l*. Held angularly, it will appear as *c*, *f*, *i*, or *m*; and if placed diagonally, as *n*, *o*, *p*, fig. 9.

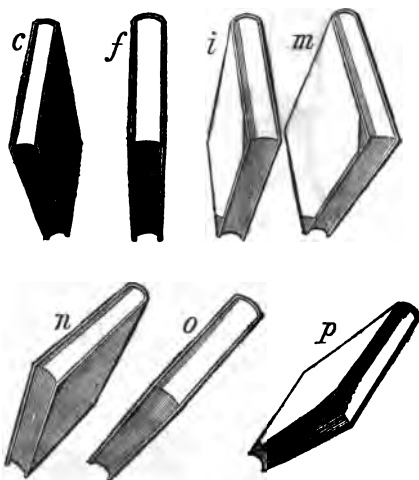


Fig. 9.

11. Circles assume an elliptical form when seen perspective. A circular object, as a wheel, placed horizontally on a level with the eye, appears as a straight line; above and below the level of the eye, it appears as an ellipse, as in fig. 10.

12. The relation between a perspective drawing and the perspective appearance of nature, may be simply illustrated by placing a piece of slightly smoked glass in a vertical position; and with the eye kept strictly at the same point, by tracing with the aid of any fine pointed instrument the outline of objects seen beyond, the result will be a correct perspective picture. If the tracing thus made be held in an angular position in reference to the eye, it will have a distorted effect; or if placed parallel to the spectator, but removed above, below, or aside from the eye, it will

be impossible to see it correctly. In proportion as it is placed in its original position in reference to the eye, it

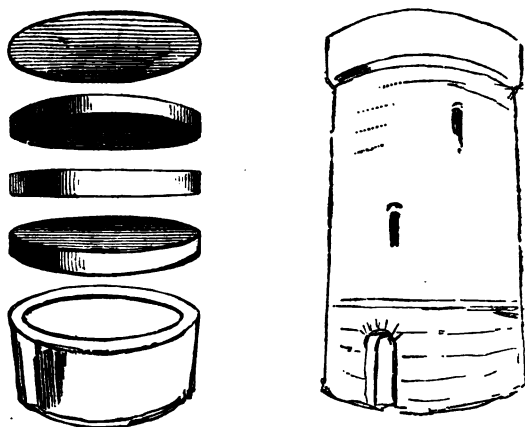


Fig. 10.

will seem to become more true; but only when placed exactly in the same position as when the tracing was made, does it appear perfectly correct.

13. And so with all drawings—there is only one point from which they can appear with correctness; this is called the *point of sight* or *point of view*. It is that from which the drawing is made, and from which it should be viewed when finished.

14. To make use of the point of sight in perspective drawings, it is transferred to the plane of the picture in the following manner: Having decided or ascertained the distance of the eye from the drawing—equal to from one to one and a half times the width of the drawing, as the case may be—draw the horizontal line where the horizon of the scene should occur. Mark the point on it immediately opposite the eye, and draw, as in fig. 11, a vertical line,

PE, equal to the distance; its extremity, E, will be the eye or point of sight transferred to the plane of the picture.

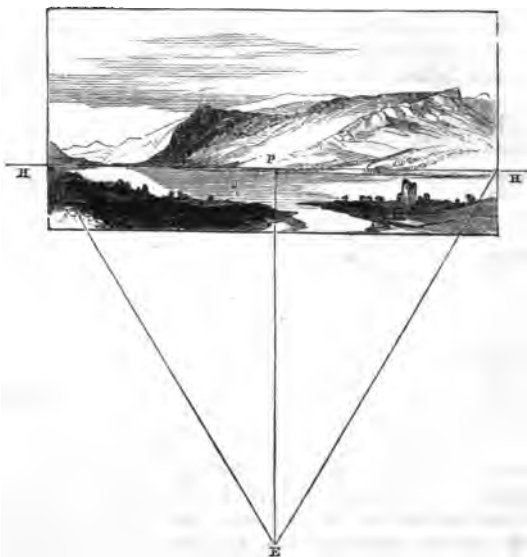


Fig. 11.

15. As a general rule, the angle produced at the point of sight by the lines coming from the bounds of the picture on the horizontal line, as H, E, should be equal to the number of degrees on the horizon contained in the picture. The horizon is divided into 360 degrees, and supposing the picture to include sixty of these, or one-sixth of the visible horizon, it would be necessary that the point of sight would be so far from the principal point, that the angle formed there by the lines H, E, would contain the same number of degrees.

16. The point P has been erroneously termed the point of sight. The old masters termed it the *centre*, because the

eye naturally chooses the point of sight opposite the centre in looking at a picture. However, as it is not absolutely necessary that it should be exactly so, the best modern authors term it the *principal point*.

17. It is optional to transfer the point of sight either above or below the horizontal line. In fig. 11, it is represented below. The choice of either position depends on convenience, or on the nature of the subject.

18. Fig. 3 shewed the reason why lines appear to terminate in a point; fig. 12 shews how this is represented on the picture. AB represents any original line, as

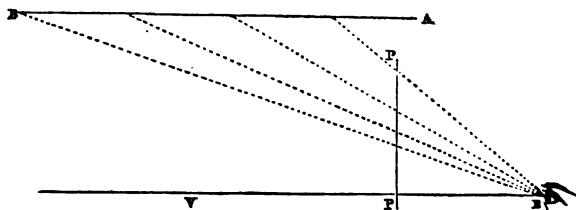


Fig. 12.

the eaves of a house; E is the eye, and PP a section of the picture. It was shewn that AB, if infinitely produced, would be visible to the eye until the rays proceeding from it became apparently parallel with it; that is, that it vanished in a line parallel to it passing through the eye. Consequently, EV, a parallel to AB, being drawn through the eye, gives the vanishing point of AB by its intersection with the picture at P, in EV. Hence the most important rule in perspective—that *the vanishing point of a straight line is the intersection with the picture of a parallel to it passing through the eye*. For example, the vanishing point of any horizontal line is the intersection with the horizontal line of a parallel to it passing through the point of sight transferred to the picture.

19. Thus, in fig. 13, ACDB is the picture; P, the principal point immediately opposite the eye; and it is required to put a cube in parallel perspective. Having drawn a perfect square, draw lines to the principal

point, P. Now, if we project a line at 45 degrees from the extremity of any of the sides of a rectangle, it will cut the other in an equal proportion. Thus, EV,

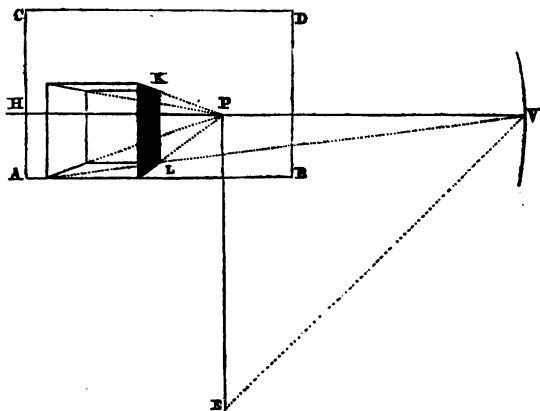


Fig. 18.

projected from E, makes PV equal to PE. Now, PE is parallel to all the lines vanishing in P, because E is the eye imagined as transferred to the picture, as if it were folded down with P for a hinge. What we want now, is to find the vanishing point of lines inclined at 45 degrees, to those vanishing in P, so that we may cut off a portion perspectively equal to the side of the square. EV, projected from the eye or point of sight, gives V, in the horizontal line, the vanishing point of lines inclined at 45 degrees, to those vanishing in P. Hence, by drawing a line from the left corner of the square to V, we cut off a space at L equal to the side of the square.

20. Fig. 14 shews the method of bisecting the front of a building, so as to put a pediment in perspective. It is done by simply drawing the diagonals FL and RC, and drawing a vertical line, WT, through their intersection.

21. Or to find the centre of the base, in order to draw a pyramid placed on the top of the cube, draw the diagonals

CG, FB, and raise a vertical line from their intersection in I. This operation is very useful in drawing church towers and similar objects, either from drawings or from

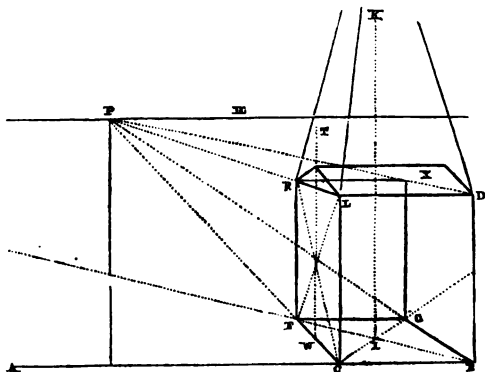


Fig. 14.

nature ; and should be attended to in every case, as a very erroneous judgment is apt to be formed if the centre is merely guessed. At first sight, it might be supposed, that by merely bisecting the space between R and D, the object would be attained ; but by inspecting the accompanying diagram, it will be found that the line IK does not bisect the space between RF and DB, and in practice it will be found that it varies with the form and position of the original object.

22. *To put a Tessellated Pavement in Perspective.*—Draw AB, the width of the pavement, and divide it as in fig. 15 ; in the present case, the sides of the squares form an angle of 45 degrees with the picture. Draw lines to the principal point, and find the vanishing point of lines inclined at 45 degrees, as in fig. 13, and which may very readily be done by measuring at once on both sides of P a space equal to the distance of the eye from the picture. Lines drawn to these points from the divisions in AB, give the tessellated effect.

23. *To put Steps in Parallel Perspective.*—Draw in the

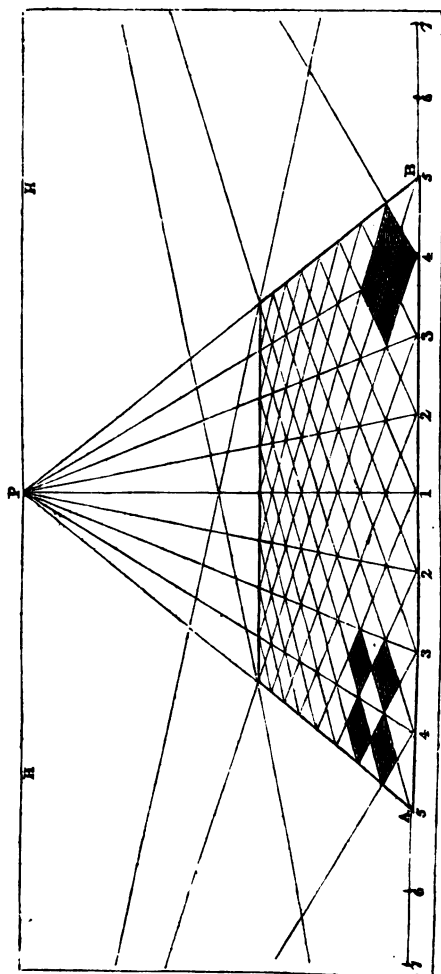


Fig. 16.

line AB, to guide the slope of the steps, and divide it into spaces equal to the space between the angle of each step ;

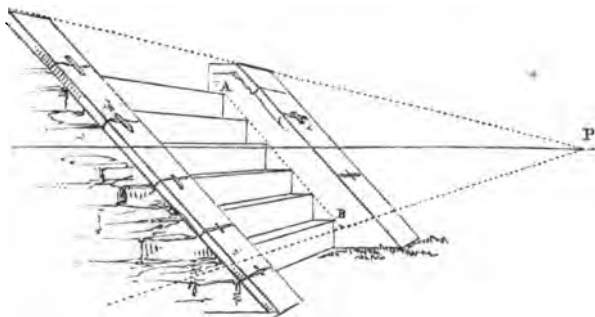


Fig. 16.

through these draw lines to the principal point, perpendicular lines equal to the depth of each step, and horizontal lines equal to the width, when the steps become below the level of the eye at the horizontal line.

24. *To put Archways in Parallel Perspective.*—The outline of the nearest side being drawn first, as in the adjoining cut, draw lines from D and E to the principal

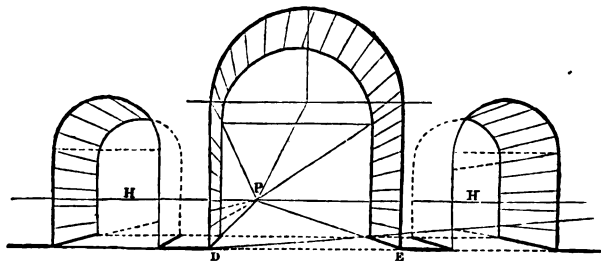


Fig. 17.

point. The situation of the furthest side is found, as in fig. 13, by measuring a space, DE, equal to the length of the archway from the point E, and cutting off

from the line, EP, a space perspectively equal to it. [The cut will sufficiently explain the further details of the process.]

25. *To draw Circles in Perspective.*—The most convenient way for amateur practice, is to *lot* a square, by dividing its sides into any convenient number of equal parts, as in fig. 18. This might be done on card-board, and kept by itself, to refer to when required. Then, by placing a square in the picture in the position of the circle required to be drawn perspectively, and lotting it, as in the cut, fig. 19, we proceed to note carefully, where, in fig. 18, the circle comes in contact with the lines; and touching these

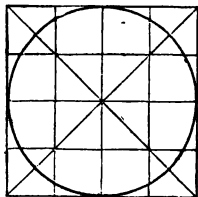


Fig. 18.

points with the pencil, we draw the circle with entire accuracy. A map, or picture on a wall, may be represented perspectively in the same manner.

26. This is also a very good way to draw pointed Gothic windows, ellipses, or other figures: indeed, by having recourse to this very simple expedient, the artist might insure sufficient accuracy in the perspective representation of any object whatever; for example, suppose a ground-plan drawn within the square in fig. 18, it could be very readily drawn within the perspective square in fig. 19. In the drawing of bridges, much annoyance is frequently experienced by beginners, and especially when the arches are varied in size, as they commonly are. By this operation, however, any inconvenience incurred by the other methods is avoided, because although the arches may vary in size, by lotting them in the same proportion with the original drawing, as fig. 18, the mode of working in each case is the same; but in all the ordinary methods, every variation in the size of the arches entails a fresh operation.

27. Besides varying in size, arches very frequently vary in form. Some are pointed, others are elliptical; but by simply drawing the form geometrically on a separate piece of paper, and lotting it and the perspective space in the

same manner, they are as easily represented as the ordinary circle.

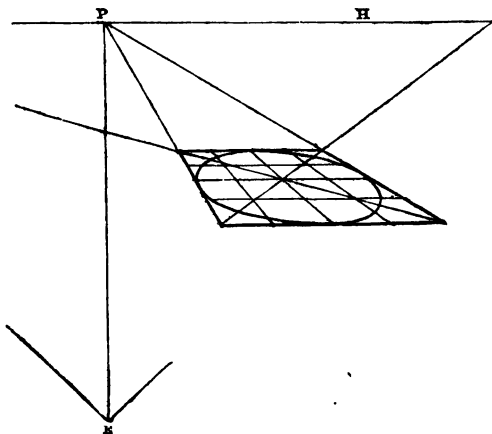


Fig. 19.

28. When the drawing is large, it is advisable to increase the number of lots, to insure sufficient correctness.

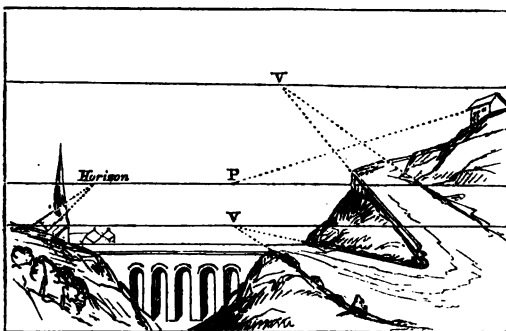


Fig. 20.

29. *To put Sloping Surfaces in Perspective.*—The same

method is employed as in representing horizontal surfaces. The only difference is, that their vanishing line is above or below the horizon. Fig. 20 shews the vanishing lines of fig. 21. The horizon is merely the vanishing line of horizontal lines ; inclined lines have vanishing lines of their own, according to their inclination.

30. In order to give a correct idea of the slope of any particular surface—as of the roadway in the accompanying diagrams—care should be taken to introduce near it some object known to possess lines of the horizontal character :



Fig. 21.

the roofs of houses are good aids in this respect ; and it will be found that, unless due attention is given to this particular, the sloping surfaces will not be understood as such.

31. *To find the Vanishing Points of Objects placed in Angular Perspective.*—All that is necessary is to draw lines to the horizon, through the point of sight, in the same relative position as the original object.

32. Thus, in fig. 22, the lines EV are parallel to the known position of the cube drawn perspective, as if they were the ground-plan of its nearest sides.

33. And whatever the position or form of the original object may be, all that is necessary is to draw lines parallel to its sides, through the point of sight, E, till

they cut the horizon, which gives the vanishing points of the sides.

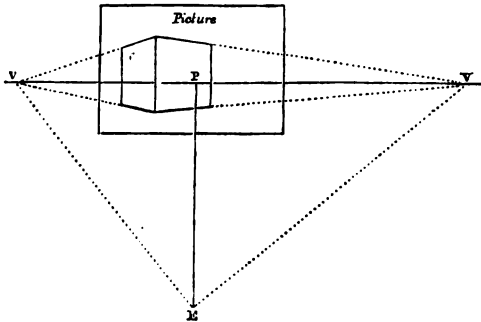


Fig. 22.

34. In the same manner, triangles, octagons, and other figures are put in perspective ; only it becomes necessary, when the figure is complicated or irregular, to draw it geometrically in the position required, as near the point of sight as is convenient ; then by projecting lines through the point of sight parallel to the sides, till they cut the



Fig. 23.

vanishing line: their intersection with it gives the vanishing points of the figure required.

35. This is the application in practice of the rule referred to in the remarks on fig. 12.

36. *To place the various Figures introduced into a Landscape in Perspective.*—One should be drawn first, as at A, fig. 23 ; and by drawing lines from his head and feet, to any point in the horizontal line, we obtain a scale of proportions for the various distances. Thus the figure on the height at C, and that on the declivity at B, have each their height given according to the scale.

37. The preceding remarks do not give a complete exposition of perspective ; but they will be useful to the student, as applicable to early studies, and are quite sufficient for ordinary amateur practice.

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## COPYING DRAWINGS.

### MATERIALS REQUISITE FOR PENCIL-DRAWING.

38. Black-lead pencils for the purpose of drawing possess various degrees of hardness, indicated by letters stamped upon them—H signifying hard ; HB, hard and black ; B, black ; BB, blacker still ; and so on—each additional letter signifying an increase of the quality of which the letter is the initial.

39. The best pencils for general use are the HB, B, and BB—the HB being used in the lighter parts of the drawing, especially in the distance, the B in the foreground, and the BB to give the strongest and most spirited touches.

40. The paper used should be rather of a soft texture, having but little size in its composition, and smooth, but not glazed ; highly sized and glazed papers do not receive the lead freely, the pencil glides over some parts without sufficiently marking them, and then suddenly, without apparent reason, will make abrupt black marks where they are not wanted. The effect consequently is unequal.

41. A drawing-board is a useful but not an indispensable auxiliary; any flat surface, if sufficiently smooth, will do tolerably well, such as the top of a table, or the boards of a large book. The drawing-board may be made of any smooth-surfaced wood: common deal does very well when sufficiently seasoned. It may be of any convenient size: for ordinary purposes, one about twenty-four by eighteen inches will be large enough.

42. It is advisable to fasten the paper to the board, especially when it has been kept rolled up, so as to keep it flat. This is most conveniently done by inserting a small drawing-pin in each of the corners; but if these cannot be had, any small flat-headed tack will do.

43. A penknife to point the pencil, and a piece of day-old bread to erase or lighten portions of the drawing when required, complete the materials. India-rubber is sometimes used; but as it smears the lead, especially in the darker portions of the drawing, and destroys the surface of the paper, it is not to be recommended. If it is used at all, the part to be erased should first be rubbed with bread, so as to remove the greater portion of the lead, and then rubbed as little as possible.

44. The mode of holding the pencil in drawing, differs a little from that of the pen in writing. The mid-finger should support the pencil on one side, and the thumb on the other, the forefinger pressing gently on the top between them: they should be a little curved, holding the pencil easily. The mode of holding the pen is only suited for lines sloping from right to left, and cramps the movement of the fingers in any other direction.

45. The paper should be placed straight before the pupil; the body kept upright, and the head very slightly inclined. The reason is, the closer the head is to the drawing, the less one is able to judge of space and proportion.

46. The first effort of the pupil should be to draw straight lines, beginning with the vertical or upright, then the horizontal; proceeding to the diagonals from right to left, and left to right. It is important that the diagonals should have the slope of forty-five degrees, as

in the accompanying figure, for when the eye is taught to recognise lines at this angle, it is enabled to note the

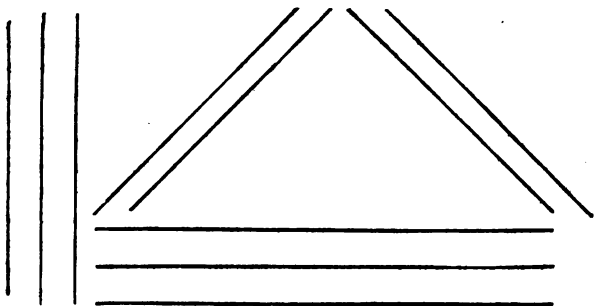


Fig. 24.

exact slope of lines that differ a little from it, by judging their relative position. In the same manner, if we readily recognise the vertical and horizontal lines, we can judge of the position of lines not perfectly upright or horizontal.

47. This lesson may appear dry and uninteresting, but it will be found most useful in after-practice, because it is applied to every drawing that can be made, as will be subsequently shewn.

48. It will be found that in drawing for the first time so simple a thing as a straight line, it is not by any means so easy as might appear. The pencil will make many perverse slips, going any way but the right one: a little practice, however, will remedy this. The difficulty occurs, because the hand requires training as well as the eye. The requisite amount of practice in this lesson should be regulated by the proficiency acquired, as it would be folly to attempt anything further until it is thoroughly attained.

49. The lines should be drawn at once from end to end, not in short pieces attached to each other; and of various lengths, from three to six or eight inches. When short, they may be drawn while resting on the wrist; but when

long, they must be made from the elbow. In the first case, the fingers make the motion ; in the second, the arm.

50. To educate the eye, it is of importance that besides making the lines straight, they should be of a certain given length ; for example, the vertical, horizontal, and diagonal lines should be drawn equal in length to each other. This should be done by making a dot where the line is to begin, and another where it is to end.

51. It will also be found useful to divide the lines after they are drawn, first into two, then by dividing again, into four parts.

52. The pupil should now proceed to draw definite regular forms, beginning with the square. This should be drawn by first making two dots to represent the length of one of the sides, and by carefully placing other two equally

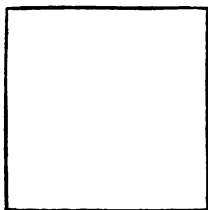


Fig. 25.

distant, as in the accompanying diagram. Proceed to draw the lines.

53. The next thing is to draw a parallelogram (fig. 26), each of the longer sides of which shall be equal to two of the shorter. This is best and easiest done by first forming a square of dots, as above, the distances between which are equal to the shorter side of the parallelogram ; then by making other two equally distant, and in a straight line with those already made, and drawing lines between the exterior dots, the figure is complete.

54. The next lesson (fig. 27) shews us how to form an equilateral triangle, or, in other words, a triangle whose three sides are equal in length. The base should first be

marked off with two dots, then a third should be placed midway between the two, but at such a distance upwards

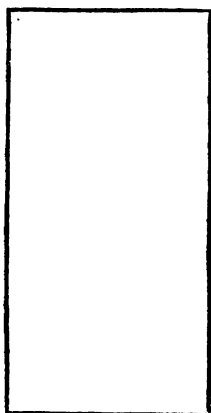


Fig. 26.

that it shall be equidistant from the first two, equal to their distance from one another.

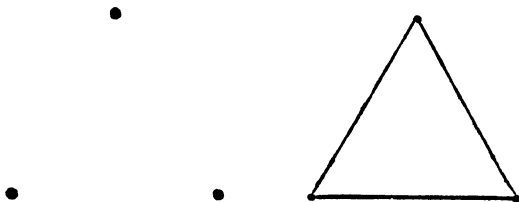


Fig. 27.

55. The pupil will, no doubt, think this rather tedious work, but we will now endeavour to shew an application of the preceding lessons, so that their use will be obvious. The accompanying figure represents the gable of a house. It will be observed that the side-walls *ab*, *cd*, are in height equal to twice the width across, and that the upper part, *aec*, is merely the equilateral triangle placed on the top.

The window, *f*, is midway between *a* and *c*; its top and base are also at equal distances from *a* and *c*; the other

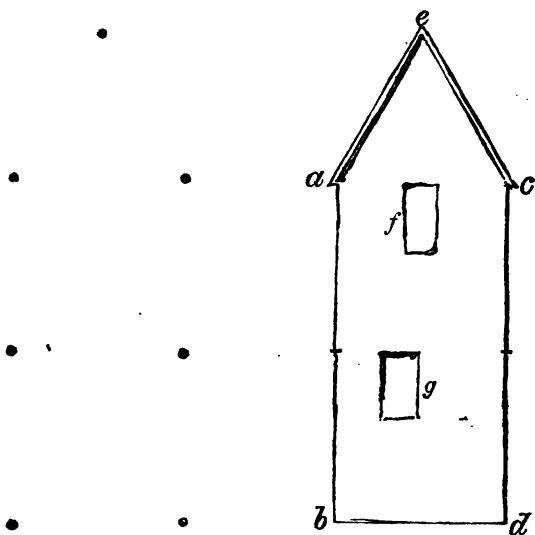


Fig. 28.

window, *g*, has one of its sides exactly midway between the side-walls; and its top is midway between *ac* and *bd*; in fact, excepting the additional difficulty of placing the windows in their positions, it is merely a regular parallelogram, with an equilateral triangle above.

56. The pupil must not, however, expect to meet often with forms possessing these regular proportions in the course of drawing; but it will be found that the only way to judge correctly the nature of any irregularly proportioned object, so as to be enabled to give a representation with due truthfulness, is to note how far it deviates from regular form, and render it accordingly: for example, in copying anything not perfectly square, the only way is to note the difference between it and the perfect square. Anything not exactly round, can only be imitated by

carefully observing the amount of its deviation from the pure circle; but both the square and circle must be thoroughly known before such comparison can be made: hence the great necessity, in beginning to draw, to be well grounded in the knowledge of regular forms, however dry and uninteresting they may appear.

57. One of the principal difficulties in the early lessons, is the perspective of buildings and other objects. Upright

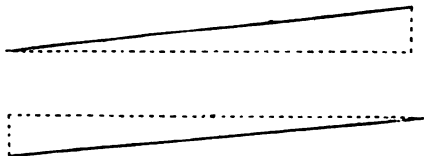


Fig. 29.

and horizontal lines are simple enough, because easily judged of, and are also assisted by comparison with the margin of the paper; but a sloping perspective line has no such direct assistance, and is much more difficult to copy.

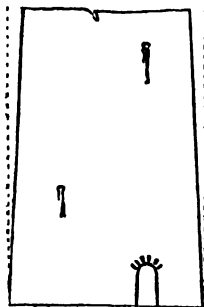


Fig. 30.

Considerable experience is requisite before it can be copied at once, the eye requiring long training to be enabled to discern readily the exact amount of slope such a line may possess. It is therefore necessary, at first, if the sloping line approaches the horizontal direction, to draw or imagine a horizontal line from either extremity, and to note the space between the extremities of the two lines, as in fig. 29; and if it approaches the upright position, to draw a vertical line in the same manner, and make the same comparison (see fig. 30).

58. Fig. 31 represents what mathematicians term a parallelopiped in parallel perspective. The slope of the lines *ae* and *bf* is ascertained by imagining the lines *ce* and

$df$ , then by noting carefully the spaces  $ac$  and  $db$ , how they differ, and making dots at  $c$  and  $d$  in the copy, and other two,  $e$  and  $f$ , opposite to them, at the same distance

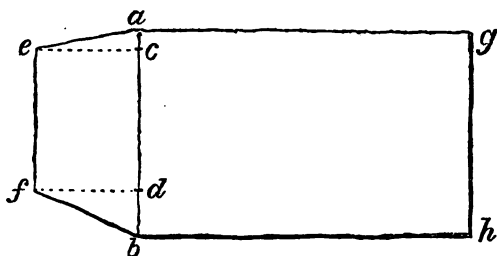


Fig. 31.

as in the original. It is obvious, that if done correctly, by drawing  $ae$  and  $bf$ , the perspective will be correct.

59. Objects in angular perspective are still more troublesome, as all the lines slope more or less; but by applying the process just mentioned to every line, they may be rendered with perfect truth. Fig. 32 represents

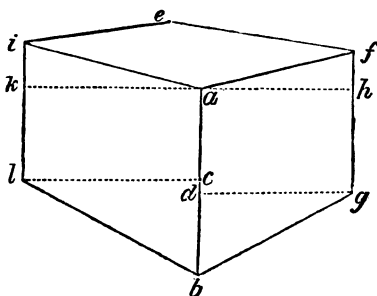


Fig. 32.

a parallelopiped in angular perspective. The first thing to be drawn is the line  $ab$ , with the points  $c$ ,  $d$ , marked on the same level as  $g$  and  $l$  in the original; the lines  $fg$  and  $il$  being drawn indefinite at their proper distance from  $ab$ , the points  $h$ ,  $g$ ,  $k$ , and  $l$  are marked opposite  $acd$

in  $ab$ ; the points  $f$  and  $i$  are easily decided, by noting these distances from  $h$  and  $k$  respectively. The point  $e$  is very important, and should be carefully observed, both in regard to its distance and position from  $a$ . By drawing lines from  $f$  to  $a$ ,  $a$  to  $i$ , &c., the perspective will be complete.

60. This may appear a tedious process; but it is of great importance, as it is the only way to copy the perspective lines of buildings and rectangular objects generally.

61. Fig. 33 is merely the same lesson repeated, the

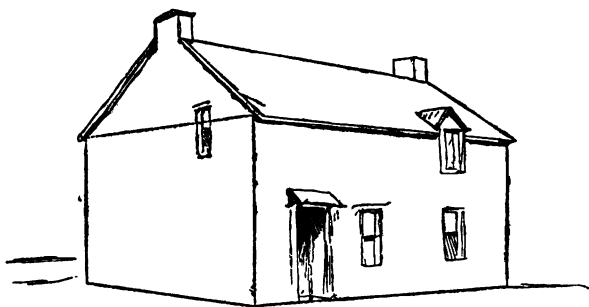


Fig. 33.

parallelopiped assuming the form of a cottage, the only additional difficulty being the placing of the chimney, door, and windows.

62. After a course of practice in such elementary lessons, if sufficient facility is attained, it may be advisable to proceed to those of a picturesque description, beginning with some simple study, as exemplified in the adjoining cut. It will be found, however, that simple as any such copy may appear, there is much to be taken into consideration; the lines are very different from those of the preceding lessons; they are broken and irregular, requiring a certain amount of practice before the hand can be trained to represent them with freedom; and it is not enough that they should be exactly copied, or

that every scratch and point is rendered; *they should be understood.*

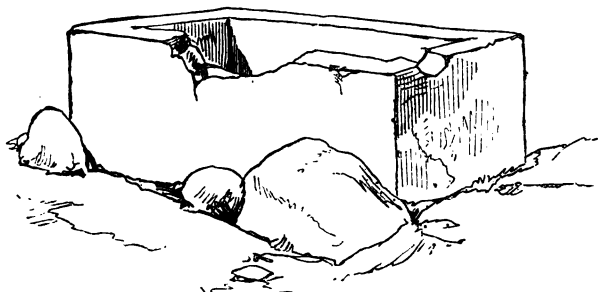


Fig. 34.

63. This thorough understanding of the subject, as the pupil proceeds, is of essential importance, as it distinguishes mere mechanical copying from real drawing. It is quite possible, and, indeed, very general, to copy drawings for years, under the impression that, by so doing, the art of drawing is being acquired; but if done without entering into the nature of the subject, and thoroughly understanding it, the time spent is worse than useless; because, besides missing the object of **their practice**—for study it cannot be called—the pupils acquire the habit of mechanical imitation—of working without thought; and a lifeless style is the result.

64. The picturesque is a quality which will be more fully explained afterwards; in the meanwhile, it will be enough to indicate those features which occur generally in early lessons. Fig. 35 represents a new-built cottage. It will be observed that its appearance is not in any way attractive as a picture; the lines are stiff and hard, and the whole is monotonous. The next figure is more pleasing, and more picturesque; the lines are more varied. It is the same cottage, but shewing the effects of age. The lines of the masonry are serrated, because, in the course of time, the lime gives way, and chinks are formed; the stones absorb moisture; these, expanded by the frost, break and crumble,

especially at their exposed angles; hence the chinks become wider, and the outline more irregular. Some

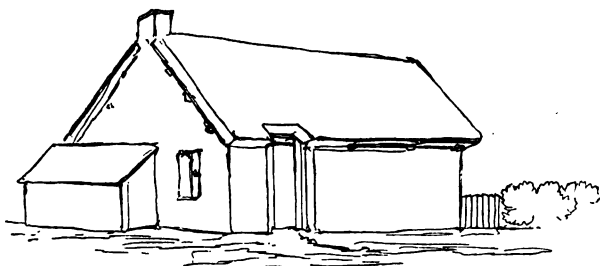


Fig. 35.

stones are softer than others—they absorb more moisture, and are more liable to the effects of climate; and as



Fig. 36.

cottages are seldom built of one kind of stone, some parts are more affected than others; hence the outline is very unequal. Variety, it will be found, is essential in drawing: all monotony, of whatever quality, has an unpleasing effect; hence, in the outline of simple cottage-wall, this must be studied; and any accidental variations, such as

have been noticed, should be carefully indicated. The simple exposure to ordinary weather has also its effect in the course of time; decay constantly goes on; the wood-work of the roof, once straight, becomes bent and warped, perhaps rotten with damp and age, shewing sundry depressions, which have the effect sometimes of giving the outline an appearance of convexity in one part, and concavity in another, as in the cut. The once smoothly thatched roof decays, and shews many inequalities; here and there, patches of moss, grass, and wild plants appear, giving variety to the surface. Thus, even in a simple outline like this, there are many qualities to be expressed, which, if not thought of, cannot be rendered with accuracy.

65. In outlining subjects of this description, the line must be carefully varied in strength, otherwise it will appear hard. As a general rule, all prominent parts should be light, and all depressions strongly marked. Those lines and portions of lines next to the light should be lighter than those away from it; thus giving variety to the general effect, and assisting the expression of character at the same time.

66. In landscape-drawing generally, the line should begin and end firmly—with a dot, as it were, at each end; the reverse of that used in figure-drawing, which is thickest in the middle, and softly expressed at the ends. This gives firmness and decision, as well as a certain picturesque crispness to the general effect.

67. Circular lines occur frequently in landscape-drawing, in the form of arches and other objects. When the circle is complete, the best way is to draw the horizontal diameter first, then to halve it, and draw a vertical diameter through the point of division. The extremities of the two lines give four points for the circle to pass through. By drawing the circle thus, the four spaces enclosed are useful, as, if any one is less than the others, the difference is readily observed. A semicircular arch, of course, is drawn in the same manner so far, the only difference being that the vertical line is made equal to half of the diameter.

68. In drawing arches, whether of bridges, doors, or

windows, the principal difficulty is drawing the stones that form the arch so as to make them nearly uniform in

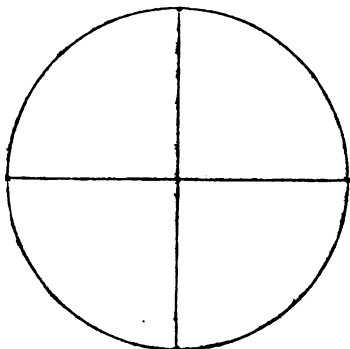


Fig. 37.

size. The key-stone, *a*, should be drawn first; then the space between it and the base of the arch, *f*, should be

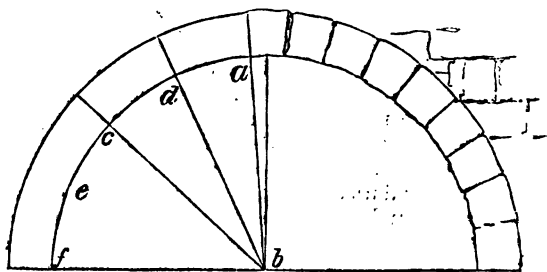


Fig. 38.

carefully divided in *c*. These two spaces in *d* and *e* should be again subdivided, until the requisite number of stones is got. The lines of the stones should also tend towards the centre of the arch, *b*, and are always at right angles to the curve.

69. Some arches are pointed, especially in Gothic buildings. In such, the lines of the stones can only be

drawn in reference to the curve—always at right angles to it.

70. Curved lines occur in other forms, more or less purely expressed. The curve of a water-fall is parabolic—that is, a curve merging into a straight line. The water, at first influenced by the force of its current and the attraction of gravity combined, forms a curve; but as the force of the current is soon expended, it becomes influenced entirely by that of gravity, and falls straight down. This combat of forces gives the peculiar curve. As it occurs frequently in the branches of trees and other objects, it should be carefully noted; the ellipse or oval, or lines partaking of its character, are also frequently met with. We make these remarks with a view to prevent the pupil from imagining that a curved line is necessarily a portion of a circle.

71. In our remarks on perspective, we have noticed the variations that circles assume when seen at an angle. The pupil should be made thoroughly familiar with these, as they are rarely seen otherwise in drawings. The elliptical form they assume is not that of a pure ellipse, the remoter portion being more contracted than the nearer, the difference varying in intensity with the angle under which the circle is viewed.

72. The system of dotting the spaces before drawing the lines, although essential when beginning to draw, may be dispensed with when the eye has been in some measure trained to judge of distances relatively. The system of *blocking*, or *sketching-in*, may then be resorted to. This consists in first drawing-in lightly, with a soft pencil, the leading features and general forms only of the subject. These, although mere indications, should be extremely correct, because the subsequent filling up and making out of parts depend entirely on their being properly allocated.

73. Before beginning to draw-in firmly, the preliminary sketching-in should be rubbed nearly out with bread-crumbs, leaving merely enough to guide the subsequent drawing; otherwise, the lines would give a confused appearance to the work.

74. When the subject is complicated by having a number of parts, the plan of division and subdivision should be

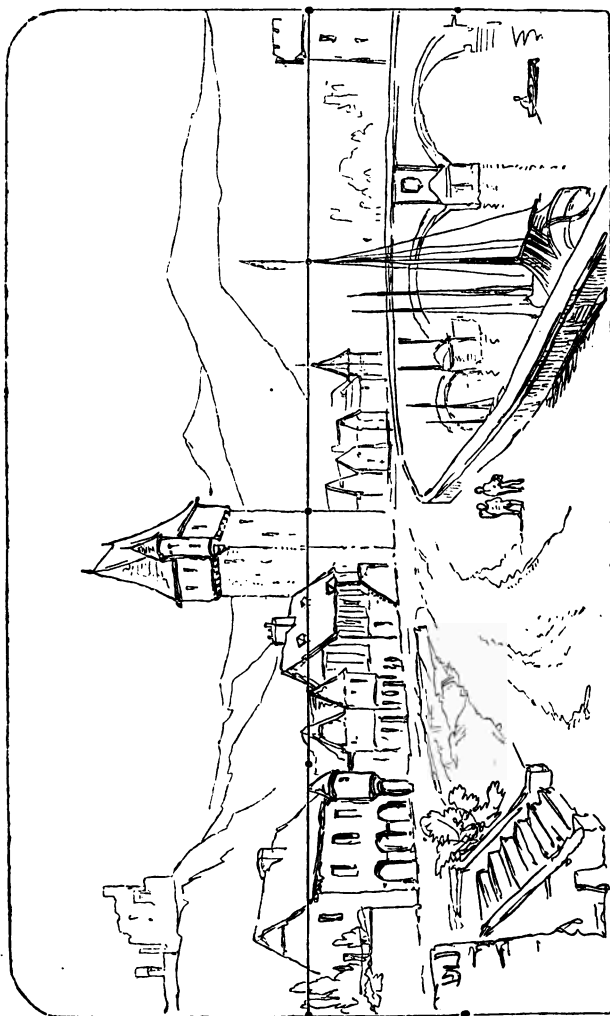


Fig. 39.

resorted to, by finding the centre in the copy, and noting what occurs there; and again dividing the parts, and noting what occurs at each of the divisions, the most complicated subject becomes merely a collection of parts, each in itself simple enough, and, as a whole, merely a matter of time and patience.

75. This process is exemplified in fig. 39. It is not to be supposed, however, that the lines and divisions are to be marked on the original drawing; they are merely to be imagined, and the points but slightly indicated on the paper on which the copy is to be made.

76. It has been often recommended to begin the drawing at the left, and proceed from that to the right side; the only reason, however, that can be offered for such a method is, that if any other part of the drawing has been finished, there is danger that it might be rubbed and destroyed while drawing the left portion. When the shading has been put in, there is certainly some ground for this supposition, but certainly none so far as the sketching-in or mere outline is concerned; there is no danger of that getting either rubbed or destroyed. By beginning to sketch from the left side, and proceeding to the right, the pupil has nothing to guide the correct placing of the various objects, so that those on the right should be in their proper places; and there is always a difficulty in getting the entire subject placed properly in the centre of the paper.

#### LIGHT AND SHADE.

77. Those parts of a drawing that are exposed to the direct rays of the sun are termed the *lights*, and as a whole, are collectively termed the *light*. Those portions which, from their position, do not receive these rays, are termed *shadows*, and as a whole, are termed the *shade*; and it is quite common to speak of the relative amount of light or shade a drawing may possess.

78. The lights vary very much in intensity, so much so, that they sometimes can scarcely be separated from what would be termed shade; and the shadows differ in degrees

of depth, so that they sometimes approximate to the lowest lights.

79. Surfaces in light, vary in brilliancy according to the angle they present to the sun's rays: those at right angles—that is, placed directly across—receive them in their fullest intensity; and those at an angle—that is, those that receive the rays sloping—obtain a weaker light in proportion to the angle they present. This may be seen by a very simple experiment. If this book be laid open flat on a table, and one of the leaves raised straight up at right angles, it will be observed that it receives the light much stronger than the flat page. If this leaf is laid gradually backward, sloping more and more, it will receive less and less light, until it becomes flat like the other, when, of course, they are illumined both alike. And if the page that originally lay flat, be gradually raised up, it will get darker and darker, until it reaches the same slope as the rays of light, when it then begins to be in positive shade, and will cast a shadow on the opposite page, which will be darker than the shaded side of the leaf, because the leaf exposed to the light throws back reflected light, and, to a certain extent, lights up the shaded leaf; but the cast shadow on the lighted leaf has no such reflection, and is consequently darker.

80. What is true in this case, is true in all. If the wall of a cottage is placed directly opposite the sun's rays, it is lighted up as high as it possibly can be; but if placed at an angle, it will be lighted only in proportion to the inclination of its surface.

81. Fig. 41 represents an octagonal block of stone. It will be observed that its peculiar form is expressed principally by the difference in illumination of the surface exposed to the light. In circular objects, such as the fragment of a pillar indicated in fig. 40, the same effect will be observed, the only difference being that the transition from light to shade is gradual. A vertical strip of light will be noticed on that part directly opposed to the sun's rays; this is gradually toned down as the surface recedes either towards the right or left. The gray tint on the left is useful in giving distinctness to the outline on that

side ; and that on the right in connecting the light with the shadow. The shadow will be observed to be equally

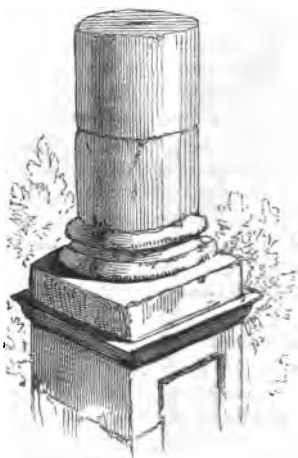


Fig. 40.

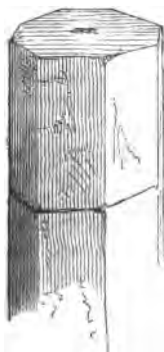


Fig. 41.

varied and softened ; it also has its strip, but of intensest shade : this is most decided on that part next the light, so as to form a distinct line. This is always the case with rounded forms. The most intense portion of the shadow begins instantly at that part where the rays cease to reach the surface ; the remaining portion of the shadow towards the right is illumined by reflected light, assisting still further the expression of the circular form. The cast shadow will be observed to be much darker than any portion of the pillar itself, and is useful in giving spirit and effect to the whole. This is true of all cast shadows : they are generally small, and afford those piquant, sharp, dark touches so much valued in drawing.

82. Light has much to do with the textures in drawing, such as those of ground-walls and roofs. When a circular tower, as in fig. 42, is illumined, that portion immediately opposed to the rays exhibits scarcely any

texture, however rough the wall may really be. The reason is obvious : the light penetrates every crevice, and



Fig. 42.

any projections that may occur have no shadows ; but as soon as the surface begins to round off from the light, the roughness begins to be seen. By the crevices beginning to receive less light, these become more and more obvious, till midway between the high light and the deep strip of shading, when the indications become less marked, until they finally disappear in the shade.

83. This gradation of texture is very important, as much so, as gradation of light or shade. Uniformity of any quality is unpleasing.

84. Fig. 43 represents an old cottage of simple construction. It will be observed that the effect is not altogether satisfactory : the lights appear bald and unmeaning, and the shadows flat and monotonous. Altogether, it is not sufficiently finished in appearance. A little thought is necessary. Variety must be studied ; for, by experience,

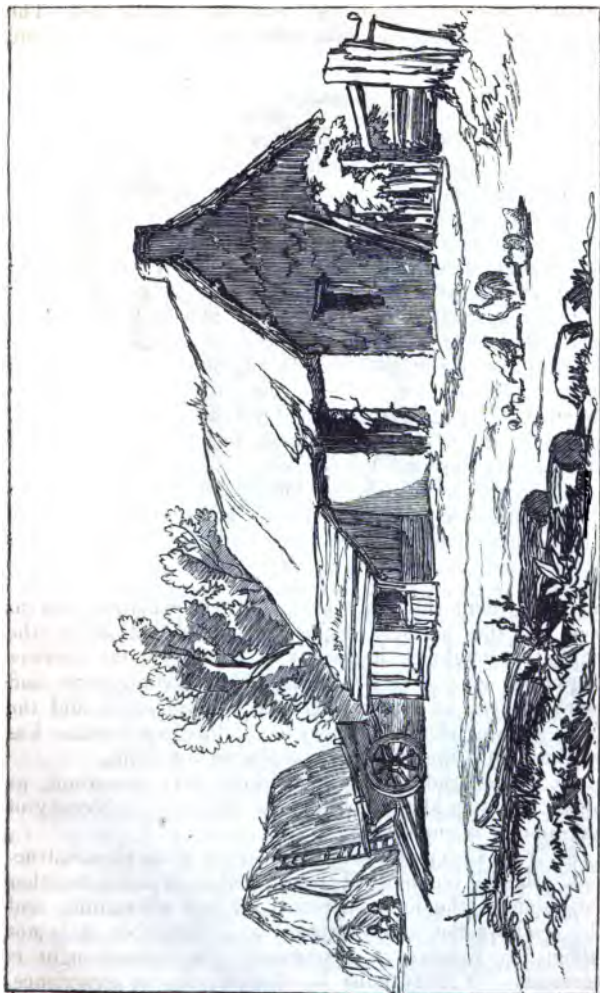


Fig. 43.

we find that monotony is disagreeable ; but nature must be studied so as to preserve truth, else the variety given may do more harm than good, and give a still more unnatural appearance to the whole.

85. Let us begin with the light on the walls. By indicating the texture of the stones towards the ground, at the angles, and towards the shadow, and allowing the touches to soften in broken marks and dots, variety is attained, and the nature of the surface indicated without any violation of probability or truth. The roof is varied by introducing hollows and lines to indicate thatch, and a few lines are given to represent moss, grass, and vegetation ; taking care all the while to make these marks and touches gradually closer as the roof recedes, thus lowering the light, and securing the greatest amount of variety. The shaded portions are deepened as they recede from the reflected light ; and the cast shadows are also strengthened, giving depth to the effect, and, by contrast, increased brilliancy to the light, see fig. 44.

86. In all tinting, whether in the lower lights or in the absolute shadows, the lines should be as soft as possible. There are no lines seen in nature ; and when they are made too obvious in the drawing, they become offensive. The best way is to cut the point of the pencil somewhat like that of a chisel, and use the broad side for the tints ; by using a sharp point, the lines become too clearly visible, and the effect is scratchy.

87. The lines should be zigzag, as in the annexed figure (45), and closely run together ; and as some experience is required before this can be done with freedom, it is worth while to practise tinting by itself. The pupil should first try the tints flat, and then graduated, taking care in working the pencil from side to side, to press equally, leaving no dots or marks at the ends of the lines. In making graduated tints, it is always best to begin at the darkest part, and allow the tint to lighten gradually until it becomes so light as to be scarcely perceptible. By beginning thus at the darkest part, more command is obtained over the effect desired than by the reverse method. By beginning at the light, the pencil is apt to start rather

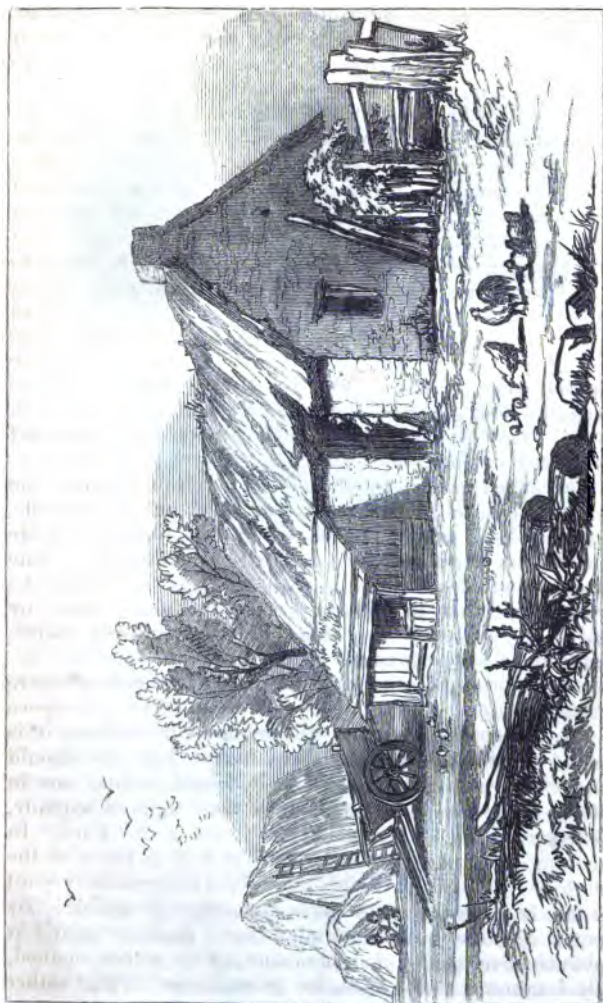


Fig. 44.

abruptly, making an indication ; and besides, it is scarcely possible for a beginner to be sure that, in going over a

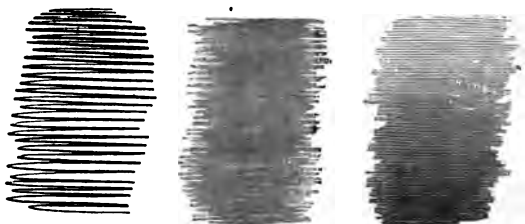


Fig. 45.

certain space, the tint will be of the exact strength required when the gradation is concluded.

88. There is always some indication of character to be preserved in tints ; for example, in the shaded wall of a cottage, the stones must be seen to a certain extent. In general, it is better that these should be put in after the tint has been made ; but if put in first, they should be drawn with a soft pencil—a B or BB, according to circumstances—and the tint put in with an HB. It should be remembered that, by pressing a soft pencil over indications made by a harder one, these become confused, if not completely lost ; whereas, by reversing the process, the lines are brought out with clearness, and the effect is transparent.

89. When the masses of tint are large, the point of the pencil should project about three inches from the finger ; and when very light, as in skies, it should be held nearly at the end, so as to put as little of the weight of hand on it as possible.

#### VEGETATION.

90. It is seldom that drawings occur in which vegetation of some kind does not form a feature, requiring a distinctive mode of treatment and a training of the hand suited to the peculiarity of character. Thus, moss,

grass, herbage, and trees, require each a different style of touch.

91. Moss is represented by simply taking care to indicate its smooth rounded masses in slight sketches. The outline next the light should be light, rounded, but not perfectly circular; and in the shadow side, it should be



Fig. 46.

firm, to indicate its cast shadow. The line altogether should be varied in strength, lighter in the prominences, and stronger in the recesses. This, besides being perfectly consistent with nature, gives a broken character to the outline, without which no line whatever can be pleasing. It will then be enough to put a little tint next the shadow, to assist the rounded appearance.

92. In more finished drawings, outlining next the light is not required; the whole of the forms are laid in by running zigzag lines so close that they form a smooth tint of the shape of the masses, contriving that the effect is slightly that of a rounded character. The cast shadows are then added, as before. (See fig. 47.)

93. Grass is rather more difficult to represent, as the hand requires some training before it can be attempted at

all. With a view to this, a good exercise is indicated in



Fig. 47.

fig. 48. It simply consists in making a ring of touches,



Fig. 48.

each resembling a blade of grass. These should be practised, first in one direction, then in the other, so as to give facility both ways ; it is also useful to begin firmly, allowing the lines to become gradually fainter as the circle is completed.

94. This lesson should be practised until facility is attained ; if once acquired, it will give a certain amount of readiness that will render subsequent lessons comparatively easy.

95. Grass grows generally in roundish masses, and the blades in each tuft spring from the centre, and hang outwards, as at *a*, in fig. 49, presenting considerable variety in direction. It is not possible, however, in a drawing, to render every blade of grass, and a mode is adopted, as at *b*, whereby its general effect is suggested.

96. It will not do, however, to represent all tufts of grass alike : they are varied in nature, and should be equally so in drawing. The forms at *c* represent modes by which some render it, but they are stiff and unnatural : all long lines like centipedes crawling on the paper, should be

avoided. More of natural variety is given at *d*, and this by simply varying the lines in length and direction; it will

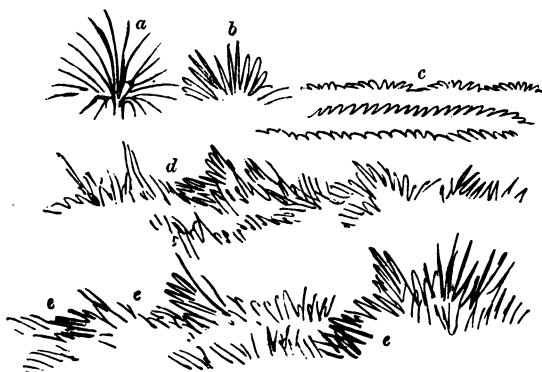


Fig. 49.

be observed, also, that touches branch off from what might be termed the main line, thus helping to soften it.

97. Variety is still further attained by studying to make the lines light next the light, and a little firmer in the shadows and depressions, as at *e*.

98. In representing grass, as seen light against a darker background, as in fig. 50, it is necessary to work in the



Fig. 50.

part in shade, leaving white forms indicating grass from

under the pencil ; that is, the darker portion is expressed by the point, and the lighter by the bare paper left untouched. In expressing the portion seen dark against the light, the lines are simply put in stronger, leaving as little of the white spaces as possible.

99. When a large mass of grass occurs in any portion of a drawing, the outline should be expressed first as in fig. 51; the centre is then to be filled up by short grassy



Fig. 51.

touches branching from the outline, each touch ending in still shorter markings, and these softened off with oblong dots, as in fig. 52.



Fig. 52.

100. The pupil must understand that in all these

operations, the outline is the principal object; it is so in all sketches, the space enclosed being understood to be filled up with what it indicates. Many beginners, from their imperfect acquaintance with art, imagine that what is expressed in this slight manner, is covered with snow; but it will be seen that this comparative slowness, which all pencil-drawings possess, is a necessary result of the means employed; it is only when the brush comes to be used, that the full representation of nature can be given.

101. Herbage and grass are inseparable in drawings, and very nearly so in nature. It will generally be found in all good drawing-examples, that herbage is introduced to give variety to large spaces occupied with grass. This is done to give variety of character, and spirit to the effect, as the leaves afford sharp dark touches of shadow, which are useful, by giving, from their contrast, more brilliancy to the part, and breaking up its monotony. Large-leaved plants are generally introduced in the foreground, as, by affording large lights and sharp dark shadows, they assist in giving strength to that part of the drawing, and, by contrast, give a retiring effect to the gray tints and small parts of the distance.

102. Hence, in copying drawings where these occur, their intention should be kept in view, making them clear and distinct, and all their shadows bold and decided.

103. Dock leaves are very frequent in drawings; and as they possess characteristics which belong to a number of plants, we will notice a few of them. The leaves are varied both in position and in size; they spring from a common centre, and radiate in every direction; hence, some are foreshortened—those in front pointing forward, those behind pointing backward, those at the sides present their sides also foreshortened. It is only in spring, when the leaves are young, as they shoot upward from the ground, that they can be seen in full without much foreshortening; because, as the stem rises, the leaves bend over from their weight. This variety of position requires considerable care in the representation, so as to preserve the form and character of the leaf. Fig. 53 represents a few of those various positions, and their perspective or foreshortened effects,

and also as they are attached to the stem. The leaves, as will be noticed, are largest at the base of the plant, and



Fig. 53.

diminish as they ascend; the reason is simple and obvious—those at the base are the oldest.

104. In pencil-sketches, it is not possible to enter minutely into detail; and in representing large leaves like this, it is enough to give the outline faithfully, to indicate the mid-rib, and a vein or two branching from it, and to shew the foot-stalk attaching it to the stem.

105. It should also be noticed, that one side of the leaf receives less light than the other, being at a different angle in reference to the light. Sometimes, it is in positive shade, casting a shadow on the opposite side. The wrinkles or folds in old leaves also give sharp dark touches, which should be indicated.

106. When several stems rise together, any variety they may possess in regard to length, form, or position, should be carefully noted.

107. Nettles are represented by deeply serrated lines, as

in fig. 54, making the touches larger and bolder at the



Fig. 54.

base of the mass, and diminishing as they ascend towards the top.

108. Ferns are often introduced in foregrounds, presenting fine masses, and great variety of form. The delicate minuteness of their detail is, however, beyond the province and style of a pencil-sketch. They are represented, as in fig. 55, only in their general effect; that,



Fig. 55.

however, should be carefully preserved: the principal points are their tapering feathery character, and the varied dispositions of their graceful forms. A pencil with the point cut like a chisel, will be found much better than a sharp one in drawing them, as it affords fine broad soft lines.

These should be zigzag, and carefully made to express the tapering character, by beginning at the base, and working outwards to the point of the leaf or frond.

109. When the fronds are to be expressed as light against a darker mass, that in the shade should be put in first, leaving lights corresponding to the general form of the fern; then, by putting a few lines through the form left, the character will be sufficiently expressed.

110. The water-dock, with its fine massive leaves, the



Fig. 56.

burdock, the acanthus, the hemlock, the mallow, the thistle, and a variety of other plants, are frequently met

with in drawings, each possessing distinctive characteristic features. In reference to these, the remarks regarding the plants already mentioned will be found useful, care being taken to preserve the distinctive characteristics of each.

111. The use of these plants in foregrounds will be seen in fig. 56, where the acanthus is introduced. Its stem and flower assist in giving variety of character, and its leaves in giving richness of texture to the part. The sharp dark touches, indicating the shadows of the leaves, serve to give spirit and force to the foreground, and, by contrast, a retiring effect to the more remote portions of the drawing.

112. Ivy is represented, as in fig. 57, principally by the

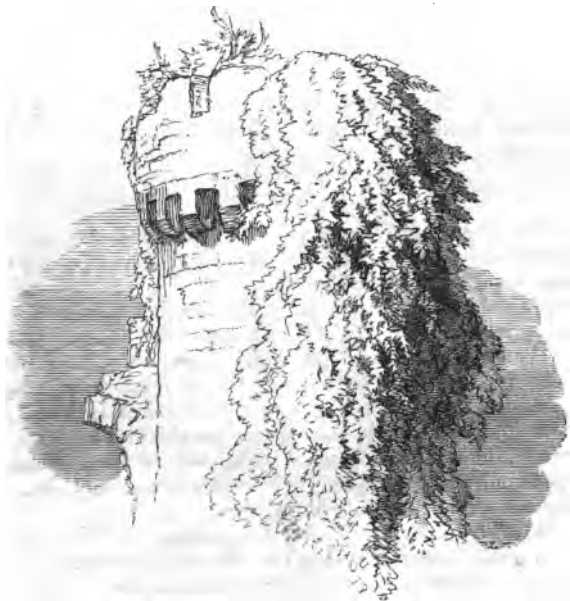


Fig. 57.

outline of its masses; these being serrated and broken, the touch is angular and sharp like the leaves; and the

masses being dense, have dark decided shadows, giving crispness to the general effect. Care should be taken in the drawing to avoid formality. Beginners are very apt to indicate forms like *a*, fig. 58, which are stiff and



Fig. 58.

unnatural; they ought to be broken up into smaller indented parts like *b*, giving as much variety to the line as possible.

#### TREES.

113. The stems of trees are cylindrical, and of course are expressed by the characteristic light and shade peculiar to that form, as in the pillar, fig. 40. The bark of some is more or less corrugated, as in the firs, the oak, elm, ash, plane, and others. This is not indicated, at least not to a very great extent, in the light, from the same reasons given in the remarks on fig. 42 in relation to rough cylindrical surfaces. It is seen most decided between the high light and the beginning of the shadow, which is a defined line. As a general rule, all those portions at right angles to the rays of light indicate texture least, and those at 45 degrees shew it strongest.

114. These corrugations or roughnesses are indicated by short lines, varying among themselves, as in fig. 59, and becoming shorter, and thinner, and more separated, as they approach the high light.

115. The stem or trunk is generally a little wider at the root than it is a few feet higher up, having so far a

tapering effect; but after this, it remains the same thickness until the branches begin to abstract a portion



Fig. 59.

of its substance, when it becomes thinner in proportion. Each successive branch takes away a further portion, until it is so far diminished as to be lost among them.

116. The same is true of the branches; each springs from the stem in the same manner as the stem has risen from the ground, the angle of junction being softened in the same way, and only diminishing in thickness as it parts with its substance in the form of other branches, until it ends in twigs at the extremities. (See fig. 60.)

117. This gradual tapering should be carefully attended to, beginners being very apt to overlook it, making

portions near the extremities as thick, if not thicker than those near the stem, as in fig. 61.



Fig. 60.

118. The corrugated character of the stem is continued in the branches, but in a more minute degree, becoming less and less obvious as they diminish in thickness.

119. The remarks previously made on light and shade, are applicable to the present case. The portions of a stem or branch directly opposed at right angles to the light, receive the highest degree of illumination; those that slope away at a lesser angle, receive less in proportion; hence the tortuous course of a branch presents considerable variety of light and shade.

120. The shadows cast on the stem, by the masses of foliage and branches, and those cast by the branches on one another, present peculiarities which should be carefully noted.

121. The sharpness of the outline of a shadow depends on the closeness of the object casting the shadow, to that

on which it is cast ; that of a stone on the ground is sharp and cutting at the edge, and that of a cloud is soft and



Fig. 61.

undefined. The shadow of a tree on the ground is most decided in that portion of the stem next the root when that happens to be cast ; the branches and foliage as they ascend being further off, throw softer shadows in proportion ; and when a remote branch casts a shadow on the stem, it is soft compared with that of one close to it ; that of the foliage is soft or cutting for the same reason.

122. It was mentioned before, that cast shadows were invariably darker than the shaded side of the objects casting them. These being exposed to reflected light, are lighter. This should be remembered in drawing a branch proceeding from the stem. The shaded side of the branch will be lighted from the stem, and the reflected light will be gradually weakened as the branch recedes. The cast shadow will be much darker and sharpest next the junction of the branch with the stem. (See figs. 60 and 62.)

123. Great care should always be taken to express the cylindrical character of the stem and branches throughout. This is best done by putting in, at the first, the dark strip which runs down the heart or centre of the shadow in all

cylindrical forms ; and by gradually lightening the tints towards the outline on the shadow side, and adding a few



Fig. 62.

touches, indicative of character, between it and the high light, the effect of roundness will be expressed.

124. In some trees, the branches are long and sweeping, as in the willow ; in others, they are tortuous and angular, as in the oak. Care should be taken, in drawing any particular tree, to preserve the same character throughout ; as, unless it is carefully noted and understood, the pupil will be very liable to have oak and willow branches on the same stem.

125. The angle at which the branches leave the stem, differs in various trees : it is acute in the Lombardy poplar,

the birch, and the willow, as compared with the larch, the oak, and the plane.

126. It should also be noted that the leading branches in all trees form a more acute angle with the stem as they ascend. The lowest shoot out often at right angles ; those immediately above having their foliage at the side, take that direction, and slope more ; the successive branches are still more inclined ; finally becoming nearly upright as they support the foliage at the top.

127. The leading branches have, therefore, a radiating appearance ; and the general direction of each is at right angles to the curve of the mass of foliage it supports.



Fig. 63.

128. The reason of this variety in the slope is, that the foliage requires a free exposure to the light, air, and moisture : the lower branches, therefore, shoot out from below as the upper foliage becomes developed ; and as they lengthen, the weight of the foliage increases in proportion, bending them down, and increasing their angle of junction.

129. The weight of the foliage at the outer extremity

of a branch gives a graceful variety to its whole extent. Fig. 64 represents an under branch leaving the stem at *a* ;

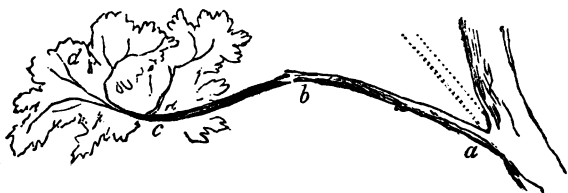


Fig. 64.

its direction, previous to the full growth of the upper foliage, may be indicated by the dotted line. It will be observed, that from *a* to *b*, it preserves its original tendency to a certain extent ; but from *b* to *c*, it gradually becomes more affected by the weight, both of itself and the foliage, forming a slight curve downwards ; and from *c* to *d*, the original upward tendency is gradually resumed : the entire form thus presenting, from natural causes, a varied and graceful appearance.

130. Care should be taken, in drawing various kinds of trees, to note how the weight at the extremity affects the general form of the branches. In the ash, where the woody fibre is very elastic, very decided curves are formed, somewhat as in fig. 65 ; in the oak, where it is more

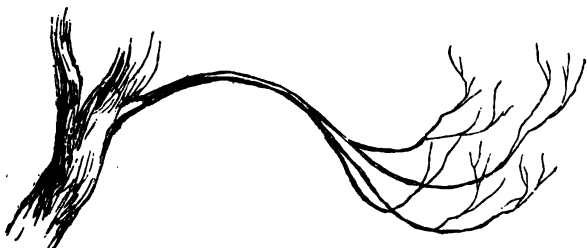


Fig. 65.

rigid, we find them more angular, and the curves slightly expressed—the whole indicative of strength.

131. The strength of a branch is always proportional to the weight of the foliage it has to support : in the willow and birch, the foliage is thin and slight ; in the plane and oak, it is thick and strong.

132. In close avenues, the inner branches shoot upward at an acute angle, and do not begin to divide until near the top, as in fig. 66 ; and in dense woods, the stems are



Fig. 66.

generally long, and do not branch until free exposure is attained. It will also be observed, that whether in the single tree, the avenue, or in the dense close-set forest, exclusion from the influences of light and air is opposed to the development of branches, or the foliage which they support.

#### FOLIAGE.

133. The art of properly delineating foliage, requires more training of the hand, and a more thorough appreciation of nature, than any other section of landscape drawing. If the hand is not sufficiently trained, its awkwardness betrays itself in every effort ; and if the subject is not

thoroughly understood, the mannered, artificial style acquired, at once shews the want of the necessary information, by the unnatural appearance of the work ; moreover, ever tree, possessing distinct characteristic features, requires a special training of the hand suited to its expression : for example, the pupil may be able, after some experience, to represent a willow, but may be utterly unable to draw an oak. The fir, the chestnut, the alder, the ash, the elm, the plane, and other trees, have each features perfectly distinct from each other, and which should never be permitted to intermingle. The pupil should never allow the texture of the oak to mix with that of the elm, or that of the willow with the ash, and so with the others. Error in this respect is very common, as many seem to imagine that, by acquiring a certain style of scribbling, it will suit trees generally ; and not only these, but grass and herbage. But after all, there is little real difficulty ; the training of the hand is easily acquired by ordinary patience ; and the knowledge of the characteristics of nature is a source of great pleasure in its attainment—improving the mind, extending the enjoyment of nature by increasing the perception of its beauties, and by elevating the taste in regard to works of art.

134. Fig. 67 is a very useful lesson for the mere



Fig. 67.

training of the hand. It will be observed that it is the same as that given in the lesson on grass, page 44. In drawing the simplest portion of foliage, the hand requires to be able to move the pencil freely in every direction, and this it cannot do without special training. This lesson, if sufficiently practised before attempting anything further, will make all subsequent efforts comparatively easy.

135. The next lesson should be the application of the

preceding to a simple cluster of leaves, as indicated at *a*, in fig. 68. It will be observed that in this, the leaves bend over on both sides from their own weight, and



Fig. 68.

appear attached to the same twig. At *b*, there are three of these clusters attached; and at *c*, there are several of these supposed to be connected by the same branch, forming a mass which presents the same characteristics as the simple cluster of leaves. It will be observed that each of the smaller clusters bends over according to its position, in the same way as each leaf bends over in the simple cluster; hence, it is useful in sketching-in a mass of foliage, to outline it, as at *d*, which, it will be observed, very much resembles *a* in its character.

136. Inattention to these particulars produces a confused appearance, as at *e*. The foliage does not appear to hang naturally; some parts hang down, others grow up, and the whole is unmeaning and unnatural.

137. Care must also be taken to think of the twigs, and the leaves they support, with reference to the branches. At *f*, there is a serrated leafy outline; but the large bald centre does not suggest foliage; it means nothing. As this mistake is very common in beginning this branch of drawing, care must be taken to attach the leaves together, as at *a*.

138. In these examples, the foliage is supposed to be in the light, and seen against a light background: it is expressed by simple outline. But in drawing a tree, the

foliage is sometimes seen light against a darker portion, and sometimes dark against a lighter. When the background is dark, that should be put in first, indicating the lighter portion by leaving it out. This requires some dexterity, as it is a somewhat difficult operation; but by using the side of the lead, and putting in the background with a broad touch, the abrupt indications left (as at *b*, fig. 69)



Fig. 69.

give a serrated appearance which, with a few subsequent touches, is readily modelled into the required shape, as at *c*. When the leaves are seen against a lighter background, the process is simple, care being taken to keep the pencil blunt at the point, so as to secure a broad dark touch.

139. Before beginning to draw a tree, the pupil should notice to what species it belongs, as a different touch is required for each. In some, the leaves are long and narrow, as in the ash and willow, and are represented by corresponding long touches; in others, they are shorter and broader, as in the elm and lime; the peculiar touch being carefully kept up throughout the whole tree—otherwise, the mixture of elm and willow leaves on one tree, will appear unnatural; yet the mistake is one a beginner is very apt to make.

140. The oak is represented by a concave instead of a convex touch, as at *a*, in fig. 70, in order to give the picturesque crisp touch by which it is characterised. Care must also be taken to make the several clusters of leaves appear properly attached together, as at *b*.



Fig. 70.

141. The Scotch fir is represented with a touch somewhat resembling that used in drawing grass, only more rigid, as in fig. 71.



Fig. 71.—Scotch Fir.

142. Other species of trees occur frequently in drawings; but if those already mentioned are properly understood, there will be little difficulty in their representation.

143. The first thing in beginning to draw a tree should be to sketch in the stem and branches, observing carefully to preserve their proper character, and any grace or variety of form they may possess. The general outline of the foliage should then be proceeded with, taking great care to place it with due reference to the branches. The masses in light should next be sketched out, and then the whole lightened, in fact, nearly obliterated, by rubbing gently with crumbs of bread, leaving merely enough to guide the subsequent drawing.

144. The shaded portions should next be proceeded with, beginning with the darkest part of each, leaving here and there a little of the white paper, to preserve lightness, otherwise the effect will be too dense and solid to appear natural.

145. It should also be noticed that the nearer portions of foliage are seen larger than those more remote; hence the touch should be larger and bolder in these; smaller and lighter as they recede.

#### DISTANCE.

146. The distance of a landscape is generally considered very difficult to imitate; but this arises more, we think, from the number of details it possesses, involving considerable trouble to render them properly, than from any other source: any one acquainted, however, with foreground character, and possessing a little patience, will have but little difficulty, as the distance may be considered as but a collection of minute foregrounds.

147. When a tree is removed a certain distance, the leaves are lost sight of, the masses alone present themselves, and is represented by putting in the general form in gray tint, using the side of the lead, and then adding markings to indicate the masses, and lines to represent the stem and branches.

148. Removed further still, the general form only is

observed, and may be represented by a little tint put in with a broad-pointed pencil.

149. A distant wood is represented by preserving the rounded tops of the trees as they follow the undulations of the ground, the stems of some of the trees as occasionally seen at the edges of the mass, and the shadows under the masses toward the ground.

150. Aërial perspective is a great assistance in the representation of distance. The intervening atmosphere and haze, increasing in density with the distance of the object, affords a fine variety of gradations, which are valuable sources of pictorial effect. In copying a landscape, care should be taken to preserve the characteristic tones of the various distances, never allowing the dark tints of one to intrude among those of another more remote.

#### TINTED DRAWINGS.

151. Drawings made on tinted paper have the advantage of greater effect in the lights, and admit of much higher effects of light and shade, with less labour, than those made on white paper. For touching in the lights, the best white pigment is oxide of zinc, called Chinese white; it is sold in the form of cakes, or moist in tubes and bottles. Both tubes and bottles are troublesome to preserve, as they are apt to spoil, and for general use, the cakes do very well.

152. Before applying the paint, it should be slightly tinted with yellow ochre, or cadmium yellow, to take off the cold bluish appearance it produces on the paper; care should also be taken with the slighter washes, to make due allowance for its drying brighter than it appears while wet. A full body of the paint should only be put on those objects which are really white in nature; all the other lights should be modified in proportion.

## SKETCHING FROM NATURE.

153. The first studies should be as simple as possible: an old cottage, a picturesque field-gate, a bridge, or such like, may be chosen; and in selecting the point of view, secure the greatest amount of variety in point of character and line. A direct front-view should be avoided if possible, and one at an angle selected in preference; for example, in sketching objects such as those indicated in fig. 72, points of view should be taken so that they

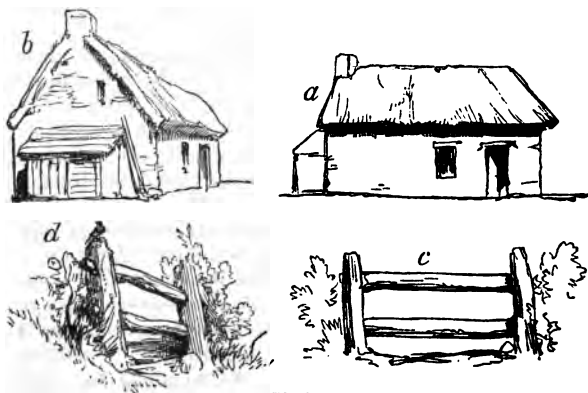


Fig. 72.

present a perspective appearance, as *b* and *d*, in preference to *a* and *c*, which, it will be observed, look stiff and formal.

154. The materials used are the same as those in copying, with the addition of a sketching-stool, and a portfolio or sketch-book.

155. In order to imitate the perspective effects of the lines correctly, great care is necessary, as the eye is very apt to be deceived: the best way is to hold the sketch-book horizontally, with its upper edge between the eye and the lower extremity of the line to be copied,

to note the amount of relative slope, and render it accordingly.

156. The first attempts should be nearly in outline, and the most striking characteristics and leading features only are to be attempted, leaving more complete finish to a subsequent period, when it may be done with the brush.

157. Too much care cannot be taken to give truth. All essays at bold drawing or style should be avoided; for it will be found that it is only by a long course of careful study that real dexterity can be attained.

158. As experience is gained, the pupil acquires confidence, and puts the proper touches in the right places, so as to bring out the effect, and express the characteristic features with less amount of labour.

159. In the management of extended views, the first point is to fix on the particular portion of the scene to be contained in the sketch: a good method of doing this is to cut an aperture in a piece of card-board, two or three inches long, of the same proportions as the sketch-book; then looking at the scene through this, and selecting a pleasing combination of objects—those occurring at the extremities should be noted, as well as those situated exactly in the centre: the sketch may then be proceeded with.

160. A still further assistance may be obtained by holding the sketch-book with its upper edge between the eye and certain parts of the landscape, taking care that it completely extends between the extremities of the portion to be sketched; then, by making dots all along the edge at the various distances where the objects occur, these may be made use of in placing them properly in their relative positions in the drawing.

161. The horizon is artificially divided into 360 degrees; and in sketching, the amount enclosed may range from 45 to 60 or 70 degrees. If more is attempted to be taken in, the perspective at the sides is apt to appear too strong, amounting to distortion.

162. When the subject is architectural, this is of still greater importance, as the distortion is more evident. If much is wished to be enclosed, it is better to take a more distant point of view.

163. After having decided on the point of view, and on the portion to be sketched, the whole should be lightly sketched in, without entering into detail, beginning with the leading lines which occur in the scene. These should be carefully compared with the original, before attempting anything further, as any error in this respect involves great confusion in putting in the details afterwards.

164. Much will occur, in sketching from nature, that has not been experienced or thought of in imitating drawings; every scene has some new peculiarity. The variety of buildings, of vegetation, of hill-formation, of ground, of water and sky, is endless; but if previous experience is brought to bear in noting and copying these, it will be found not so impracticable as at first sight might appear.

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## ARRANGEMENT OR COMPOSITION.

165. There are certain general principles existing in all good works of art, which are necessary to their being so. It might be thought that this would be something superfluous—that any scene in nature, if transferred, would give equal pleasure: we have such transferred pictures in ordinary photographs; but it will be found that few give that satisfaction which would be expected; and when they do, they are careful selections from nature, reflecting credit on the taste of the photographer. Whether in nature or in art, certain laws of form, of colour, of light and shade, are essential for deriving satisfaction from the scene.

166. Variety is one of the first of these; everything that is formal or repeated, becomes distasteful. A simple rustic paling, rudely made, with gaps and interruptions of bits of hedge, is more pleasing than one of the most perfect construction. An old cottage, rough and picturesque, with bent roof and ruined aspect, gives a certain satisfaction, which no new building ever does. The winding, rutted

footpath, is more pleasing than the finest portion of a perfect road. And in works of art, this has particularly to be attended to. A little sameness may occur in nature, without creating any dissatisfied feeling, because, by a change of scene, the defect may be immediately remedied; but a work of art is a deliberate matter of choice, from which there is no such means of escape; everything, therefore, should be carefully studied.

167. The principal object should never be placed in the

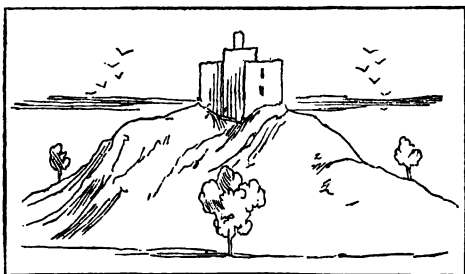


Fig. 73.

centre of the picture, as in fig. 73, but rather a little to one side, as in fig. 74.

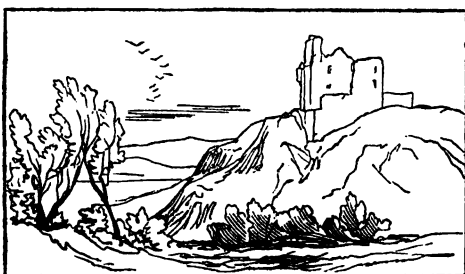


Fig. 74.

168. The sides of the picture should also be different

from each other, all repetition being offensive. Fig. 75, as contrasted with fig. 76, will make this very evident.

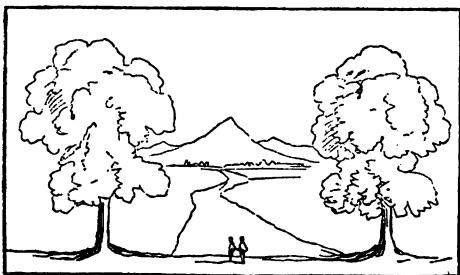


Fig. 75.



Fig. 76.

169. The horizontal character of the distance should not be repeated in the foreground, and *vice versâ*, as shewn in the preceding illustrations.

170. Figures introduced should also be kept away from the centre, and from below any prominent objects in a direct line above; thus, those in fig. 75 are placed offensively below the peak of the distant hill. This defect is remedied in fig. 76.

171. While repetition is offensive, balance is necessary.

In fig. 77 there is a vacuity on the side opposite to the tree, which appears unpleasing. This is remedied in fig. 78, by the trees introduced, which, although smaller and more distant, are yet sufficient.



Fig. 77.



Fig. 78.

172. It is not always essential, however, that trees are made to balance trees ; other objects may sometimes be introduced, as in fig. 79, where the figure and camel restore balance, and by the sharpness of the dark touches, contrast with the distance beyond.

173. When hills form a prominent feature in the landscape, care must be taken to avoid repetition of line. There may be but little positive difference of character ; yet, by



Fig. 79.—Sea of Tiberias.



Fig. 80.—Scene in the Rocky Mountains.

varying the direction, the length and details of form, as in fig. 80, sufficient variety may be attained.

174. When cliffs and rocks occur, as in the present example, care should be taken to preserve the angular, abrupt character, and the rounded lines of the superincumbent soil, as much depends on the intermixture of angular and rounded forms.

175. In all hill-drawing, formality should be studiously avoided. The forms may be pyramidal, and yet not exactly like a pyramid. The angle or slope of one side should never be repeated on the other; and if the line on one side is convex, ending in the concave form, that of the other should be reversed, concave ending in the convex; and this should be more or less expressed in strength on one side than on the other, assisted, if possible, by difference in the length of the forms.

176. In order to give a receding effect to a series of hills retiring behind each other, as in fig. 81, it is necessary to keep each outline soft, and the details rather subdued as they come in contact with the nearer ridges, so as to effect a separation, otherwise they will appear attached, and the effect of distance will be lost. This effect will be noticed in nature. There is always a certain amount of haze in hollows and intervening valleys which lightens the tint and softens the details.

177. A knowledge of geology will be of great assistance in hill and ground drawing generally, as various peculiarities will be noticed and easily rendered, which would otherwise entirely escape the attention.

178. When the horizon is low, as in fig. 82, trees are generally introduced as foreground objects, and may be so disposed, as in the present example, as to interfere but little with the subject; while they may be made to assist the general effect most materially, by filling up a portion of the sky, giving variety to the scene, and affording, by the lines of their stems, a sufficiency of contrast to the general horizontal tendency.

179. When the horizon is high, there is less occasion for such assistance, and the trees introduced should be of the slightest description, as in the cut on page 76.



Fig. 81.—Montenegro.



Fig. 82.—Bucharest.

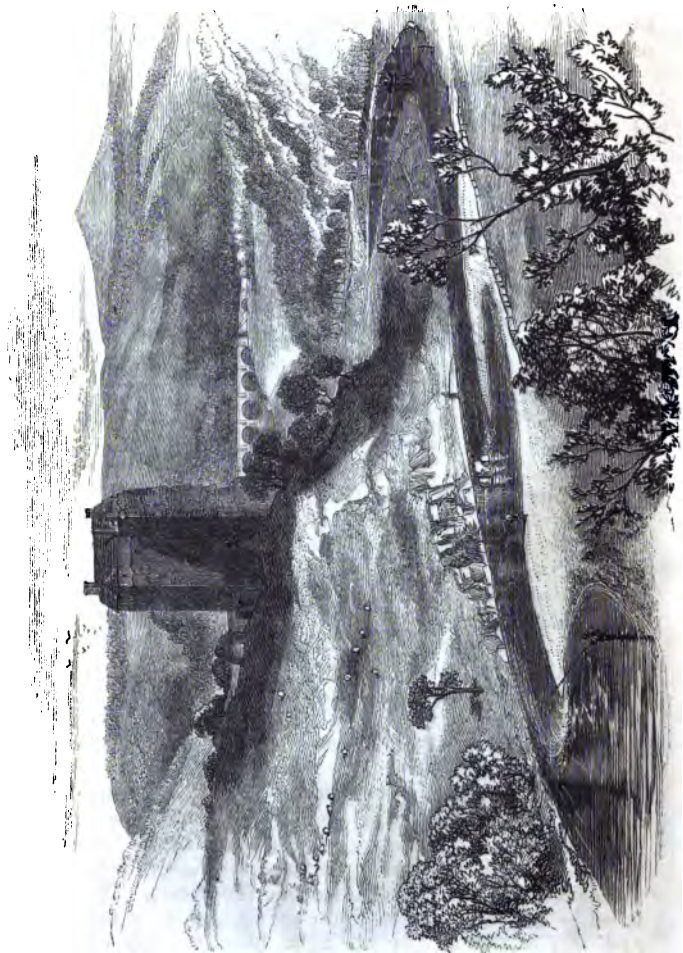


Fig. 83.—Neidpath Castle, Peeblesshire.

It is obvious that a mass of foreground foliage would block up a portion of the scene, without contributing in any way to the general effect.

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## GENERAL PRINCIPLES OF LIGHT AND SHADE.

180. The study of light and shade is most important in the art of drawing, as, besides giving feeling, it assists the expression of the objects introduced, and is the principal means of giving effect to the subject.

181. Although it is impossible to give any fixed rules for the relative proportion between the light and the shade of a picture, still, unless certain methods of arrangement be adopted, such as are found in the works of the great masters, there will be little likelihood of producing a satisfactory effect.

182. The light and shade of a picture should be considered as a whole: in some, the light is nearly surrounded with shade. In fig. 84—the Ford, by Claude—this particular arrangement will be observed. The principal mass is the sky near the horizon. It will be noticed that the dark mass of the tree to the right is sharply contrasted with it; the shade then crosses to the left, becoming lighter and lighter as it approaches the sky, which is also a little deeper towards the upper portion of the picture. The general principle observed is, that the principal light is contrasted with the strongest dark, and that they radiate gradually from the point of contrast to the left, where they harmonise. By this mode of arrangement, the greatest softness is secured, with sufficient force to give spirit to the picture.

183. The methods by which this is effected should be carefully noted. The dark mass of the tree to the right is connected with the mass of gray tint on the left by means of the dark shadow traversing the foreground, and the dark points of the cattle crossing the stream. The eye is led by the inclined tree to the principal mass of foliage; and this is softened by the light foliage of the willow introduced between it and the sky.

184. The figure of the herdsman serves as a valuable



Fig. 84.—Landscape by Claude.

point of dark, and breaks up the line of the bank on which he is seated ; and the cattle are also finely varied in their

positions, giving interest to the picture, and assisting the general effect.

185. This example is a very valuable one, shewing a fine natural effect produced by art. The pictures by this master have been thought by some to be too simple, shewing scarcely any art in their arrangement; but by studying the present, it will be found that he at least knew in one instance how to combine the highest art with a simple expression of nature.

186. In all scenes where the light is surrounded with tint, care should be taken to prevent it becoming a mere spot, by introducing other subordinate lights, so arranged that they will not detract from its value. In fig. 85, the



Fig. 85.—Neidpath Castle, Peeblesshire.

principal light is the old castle (the same scene as fig. 83, but from another point of view), and is repeated by the light on the water, which is connected with it by the

minute lights behind the trees, and the light of the trees to the right.

187. In fig. 83 the principal object forms a mass of dark, which is prevented from being a spot by the shadow going across the portion which connects it with the dark tint of the water. By carrying the shade across the picture from side to side, greater breadth is attained than when broken up; this is also exemplified in fig. 82, where the light is treated in the same manner.

188. The expression 'breadth,' is applied to massiveness of the general effect, as opposed to a multitude of lights and darks, which have a distracting effect. A good example of breadth is given in fig. 84, where the quiet massive tones are in admirable keeping with the nature of the subject. It is not to be supposed that breadth has any connection with flatness of effect. A tint may be large and massive, and yet varied; and in the present example there will be found sufficient variety in every part. The mass of tint to the left is broken up by flickering lights of the sky through the trees, and that on the foreground by the lights on the cattle and vegetation. The balance of shade is preserved by the tree to the right.

189. Balance in light and shade does not mean perfect repetition: in the present case, the one side is much stronger than the other, and in every instance there should be considerable diversity.

190. All repetition is offensive; and while arranging the effect of a drawing, in order to preserve balance, it should be done with a view to obtain the greatest amount of variety, giving a small portion of dark to balance a mass of middle tint: no precise rule, however, can be given in this respect, all must be left to the judgment.

191. Softness of tint is very important in all drawings; this is best attained by studying to keep a gradation in each by itself, and among all collectively—giving sufficient decision when required, to prevent woolliness.

192. Hardness of tint is produced by a monotonous cutting edge to any portion in a drawing, and is remedied by lightening some portions, leaving merely enough sharpness to preserve clearness.

## WATER-COLOUR DRAWING.

193. The requisites for water-colour drawing consist of a board and paper, or a solid block sketch-book, a set of moist colours, water-bottle, and brushes.

194. The best brushes are the sable, red and brown. The brown are the best ; but for ordinary use, the red answer very well, and are much cheaper. It is not advisable to use too small brushes, as the style is apt to become cramped, and it is difficult to manage flat washes with them : they should be as large as can conveniently be managed. A small brush or two, for occasional detail, is, however, useful, but should only be resorted to when absolutely required.

195. Paper of various kinds, according to fancy, is used in water-colour drawing ; for ordinary use, it should be stout, well sized, and moderately rough.

196. To stretch the paper properly, it should be gently sponged with plenty of water, and rolled up whilst wet, for half an hour, so as to expand and soften ; in this state—laid flat on a clean towel—the board should be placed on it, and the edges pasted or glued on its back.

197. A very convenient kind of board is made with a frame and shifting panel : it may be had in the shops, but there is sometimes considerable trouble experienced if the panel does not exactly fit the frame, the paper becoming bagged and loose when dry, and swelling up while drawing.

198. The following is a list of pigments which will be found generally useful for landscape :—Yellow Ochre, Gamboge, Indian Yellow, Raw Sienna, Raw Umber, Madder Lake, Madder Brown, Light Red, Burnt Sienna, Burnt Umber, Vandyke Brown, Cobalt Blue, Indigo, Sepia, Lampblack, Chinese White.

199. Before trying to colour with these, the student should endeavour to become acquainted with their properties by experimenting on a piece of paper.

200. The pigments used in drawing are only pure in two cases—gamboge and chrome yellow may be considered pure yellows—but there is no pure blue or red ; all will be

found mixed with some other colour. For example, cobalt and French blue are inclined to purple, having a small proportion of red ; and are hence unfit for clear green tints. Indigo and Prussian blue, on the other hand, are inclined to green, as they contain a small proportion of yellow ; and are hence unfit to be used to produce purple, but are useful in all green tints.

201. Some pigments are transparent, some semi-transparent, and some opaque. For example, gamboge is transparent ; Indian yellow, semi-transparent ; and vermilion and chrome yellow, opaque. These different qualities render them useful for different purposes, to which the properties of each are suited.

202. Rich transparent pigments, such as gamboge, Vandyke brown, and asphaltum, are frequently of great use in foregrounds, but are dangerous anywhere else, as they are apt to destroy the aerial perspective from their strength ; while they may be made to assist it, if judiciously used in their proper place.

203. On the contrary, drier and more opaque pigments assist the effect of distance—yellow ochre, light red, cobalt, and French blue, for example.

204. The following are the general properties of the various pigments :—

205. Yellow ochre is very useful, clear and moderately warm, used in all parts of a drawing.

206. Raw sienna is a very fine, clear, warm yellow, very valuable, as it is nearly transparent ; used much in the representation of grass and foliage, both by itself and by admixture.

207. Burnt sienna has the same properties as the last, but is redder in tone ; useful in autumn tints ; and by admixture with indigo, gives low-toned, useful greens.

208. Indian yellow is a fine, bright, useful yellow ; it is semi-opaque, and is useful in this respect, as it preserves its properties of colour when used in combination with other pigments. For example, mixed with lampblack, it keeps green, however dark the tint may be ; whereas gamboge, which is similarly yellow, loses its colouring power, especially in dark tints.

209. Gamboge is a clear useful yellow in foregrounds, as, from its rich gummy nature, it gives deep touches and tints when employed by admixture with other pigments.

210. Cadmium yellow is useful in giving the bright golden tints of sunrise and sunset; it is of a warm tinge, and is sometimes used to heighten similar tints; but it should be used cautiously, and only in finishing the drawing.

211. Light red is useful in various ways; in the representation of earth and buildings; and by admixture with cobalt or French blue, fine grays are obtained, which are useful in skies.

212. Indian red is useful sometimes—in the same manner as light red—but the tone is deeper, and slightly colder.

213. Vermilion is useful only for occasional touches on figures and objects introduced into a landscape, put in with a view to affecting the tone of the drawing; it may be modified with lake or Indian red, according to circumstances.

214. Lake is very generally useful, but is not permanent. Madder lake and madder brown should be used, as far as possible, in preference: these are exceedingly clear in their tones, and wash well; they are employed in all ruddy tints, either by themselves, when required as pure colour, by admixture, or in washes passed over other tints. The lake is used principally in the distance, when purples are required; and the brown in middle distance and foreground.

215. Cobalt and French blue are clear useful blues, of a slightly purple tendency, useful in the sky, and in giving atmospheric effect to the background.

216. Prussian blue is a good washing pigment, but it is too strong for ordinary purposes. When used to any extent, it is apt to induce coldness in the general effect. When mixed with yellow, its greenish tone is favourable, where bright greens are required, but should be used with caution.

217. Indigo is a very useful pigment; it washes well;

and with the various yellows, makes useful green tones ; its tints with burnt sienna are of great service.

218. Emerald green is sometimes used for bright touches, in the same manner as vermilion, but it is to be very cautiously introduced.

219. Raw umber is a low-toned yellow, useful in the representation of earth, and sometimes of stone.

220. Burnt umber is a little redder than the preceding.

221. Sepia is a clear, cool brown, and gives clear, low, transparent tints.

222. Chinese white is occasionally useful in assisting atmospheric effect, by passing a little of it, combined with cobalt or French blue, as a thin wash over the distance ; it is also sometimes used by admixture with yellow ochre and cadmium, to heighten lights in buildings ; but in transparent drawing, it should be avoided as much as possible.

223. Drawings are sometimes made in opaque colour, like oil-paintings, and for certain purposes the style answers admirably. The ordinary pigments are employed ; but those that are opaque are applied first—the semi-transparent and transparent used by passing over these in finishing. The pigments employed in the first painting in this style are Chinese white, yellow ochre, raw umber, burnt umber, chrome yellow, orange chrome, vermilion light red, Indian red, cobalt, French and Prussian blue.

224. There are three primary colours—namely, red, yellow, and blue—and out of these, all the various compound tints are formed. If we possessed these three in their purity as pigments, we would require nothing else ; but unfortunately this is not the case.

225. By mixing the primaries one with another, the secondaries—orange, green, and purple—are produced. Red and yellow produce orange ; yellow and blue, green ; and red and blue, purple.

226. By mixing all these together, black is produced : thus, red added to green, or yellow to purple, or blue to orange, destroys them, and makes black.

227. But if a small quantity only of any third primary is introduced into a combination of the remaining two, it simply lowers it, making it more gray : thus, red added in

small quantity to green, breaks it, as it is called ; that is, destroys its greenness in proportion to the amount introduced.

228. And if a small quantity of green be added to red, the like effect will be produced ; and so with the others.

229. Contrast of colour may be effected by simply opposing one tint with another, differing in any respect—as red with blue or yellow, with gray or green, with black or white ; but the strongest effect will be obtained by green, as this is composed of the remaining primaries, blue and yellow, which, when combined, are so antagonistic as to destroy red if mixed with it, and so with the other primaries.

230. The secondary colours, while they differ from each other, are not complete contrasts, because any two put side by side will contain a colour possessed equally by the other. For example, orange and green each contain yellow ; purple and orange, red ; and green and purple, blue ; hence the best contrasts to each are the opposing primaries, as blue to orange, and yellow to purple.

231. Light and dark tints are sometimes considered sources of contrast ; for example, the dark browns of a foreground as contrasting with the light bluish tints of a distance ; but this is not so much a difference of colour as of light and darkness, which should be considered by itself in arranging the light and shade.

232. Brightness and dulness of tint should be studied in contrasts as a source of variety ; as red with a greenish gray, or orange with a bluish gray.

233. However, in considering colour, it should be first thought of merely as either primary or secondary ; colour-tints should be examined as red, yellow, or blue, orange, green, or purple ; then as weak or strong, as light or dark.

234. Besides the secondary colours, some make an addition of tertiaries ; but these are not distinct colours, being merely the mixture of secondaries, as green with orange, which is equivalent to two parts of yellow with one of blue and one of red. Thus, we have the three primaries neutralising each other, making black ; but the yellow predominating in quantity by one part, preserves

itself. There is, consequently, a low-toned yellow, which is called citrine. In the same way, the other mixtures are called russet, which is a low-toned red ; and olive, a low-toned blue ; but these are not separate colours, but merely modifications of the primaries, and cannot be considered otherwise.

235. Browns are either low-toned yellows or orange ; for instance, sepia and raw umber are low-toned yellows ; burnt umber, a low-toned orange ; as also Vandyke brown.

236. Colours are divided into warm and cold. When they partake of red, they are said to be warm, and cold when it is absent. Yellow may be said to occupy a medium position, and blue is decidedly cold.

237. White and black are also cold in their effects, and cool tints by admixture with them.

238. The warmest tint is red ; the next, orange ; and the lowest, as warm colour, red purple.

239. The coldest tint is blue, green is less so, and purple the least of the cold tints.

240. Harmony of colour consists in the connection between a variety of tints, so that they appear to blend gradually together, and contribute breadth to the general effect.

241. The most harmonious effect is produced when one colour tones the whole picture, as occurs sometimes in nature, especially at sunset, when there is a slight haze in the atmosphere.

242. In water-colour drawing, this is assisted by toning the paper before beginning to apply the colours, by washing it over with a warm tint, which serves to give tone of the same description to the entire drawing, by modifying all the subsequent tints passed over it.

243. The first lessons should be merely with a view to acquire power and facility in handling the brush. For this purpose, simple sepia sketches are very useful ; and it will be beneficial practice to draw as much as possible with the brush, with the least possible assistance from the lead pencil, as by doing so, boldness and decision of style are acquired.

244. As a general rule, the light tints should be put in first, passing them over all those portions to be occupied by the deeper tones ; then, by gradually deepening them, the edges of the tints are preserved clear and distinct, without awkward joinings, which are sure to occur when the parts are attached otherwise.

245. Smooth surfaces are represented by simple washes ; those of a marked or rough description are indicated by touches with the point, or by dragging with the side of the brush. For example, the texture of foliage is brought out by drawing with the point of the brush in precisely the same manner as with the black-lead pencil ; while the rough appearance of broken ground, or a rough wall, is effected by dragging the brush nearly dry rapidly over the paper.

246. The light clouds, such as the cirrus, are brought out in the same manner, by dragging the brush lightly, with but little colour.

247. When any lights occur which cannot be left out, they may be covered over and taken out when finishing, by applying the wet brush to the part, indicating the form of the light, and allowing it to lie till the part is softened : the moisture should then be removed by applying blotting-paper, which prevents it spreading ; then by immediately rubbing with bread, the light will be sharply brought out. Gentle rubbing with the pocket-handkerchief suffices when the light required is not very bright, and India-rubber is required when it is wanted perfectly pure.

248. Sometimes a part is put in too strong for the surrounding tints ; in that case, if the part is slightly moistened, dried with blotting-paper, and then gently rubbed with fine crumbs of bread, it may be lightened or softened to any extent.

249. It was mentioned that, in laying on the tints, the darkest should be applied last ; and it will be necessary to do this in nearly every case. In the representation of foliage, the general tone is put in first, then the deeper portions and dark touches. By putting the darks first, they are apt to be destroyed ; they certainly lose their sharpness.

250. In colouring, the particular combinations of pigments required to represent any particular object depend so much on local circumstances, that no precise rule can be offered, every artist having a different method.

251. In sketching, it will be found that as much depends on acuteness of perception in observing the varieties of colour, as on other qualifications. Many being aware that trees are green, think it enough to paint them so, without observing peculiarity of tone; but no two trees are alike in this respect—some are grayer, some colder, and some warmer than others.

252. The green on the shaded portion of a tree is very different from that on the light; it is illumined chiefly by reflection from the sky, which, when clear, makes it very blue, as compared with the portions lit by the direct rays of the sun. The same is true of herbage generally, and should be carefully noticed in hill-scenery, where the grass on the shaded portions is much colder than the light.

253. The green tint of a leaf when the light shines through, is very different from the effect when it shines on it: in the one case, the green is intensely yellow and transparent; in the other, it is comparatively dull and cold.

254. As a tree consists of a number of leaves placed variously in regard to the light, much variety will be observed; and in the simplest group of dock-leaves by the wayside there is variety of colour.

255. As a general rule, when the sun is in front, the rays pierce through the leaves in every direction of the drawing, but *principally* when they occur between the eye and the sun. If we look at a grass-field in this way, we notice that that portion immediately in front between us and the sun is intensely rich in tint, being of transparent yellow green; but towards the right and left, it becomes gradually of a colder hue.

256. The modifications of colour are so various, from the multitude of objects in every scene, that nothing but attentive observation can give any approach to truth. It is not enough to call earth brown, and paint it with

Vandyke brown; nor the sky blue, and paint it with cobalt. Earth is infinitely varied; its gray masses, sometimes inclined to yellow or red, are illumined by the sun on one side and by the blue sky on the other. An old rutted road presents a fine study in this respect; and the tints of the sky are constantly changing—sometimes greenish, at other times pure blue—one time clear, at another softened by intervening haze.

257. The effect of the atmosphere in altering the local tints of objects as they recede, should be carefully noted, so as to keep the aerial perspective correctly. A tree is much colder in tint at a hundred yards' distance than when close at hand. Every increase of distance adds more blue atmosphere between the object and the spectator; so that, ultimately, it sometimes appears as nearly pure blue.

258. Blue is not, however, always essential to the effect of distance; in hazy weather, especially at sunset, the distance may be indicated by low-toned yellow and ruddy tints; and intervening objects partake of the same hue.

259. The mistake is very often made of giving a hazy effect to sky, filling it with warm tints, and making the landscape of totally different character: it will always be found that the tints of the sky prevail over the landscape.

260. In sketching, much attempt at high finish is thrown away. The effects of nature are so transient, that they should be seized with the greatest rapidity; the touches should be left sharp and clear; softness should be gained by putting touch within touch, leaving sometimes a little of the first at the edges. This will give finish as well as transparency.

261. The washes should be thoroughly dry before others are placed over them, as the working up and unequal mixing of the tints create muddiness.

262. Variety of tint should also be a matter of solicitude, as nothing is less pleasing, and, indeed, less natural, than flatness and monotony. Ruddy and yellow tints should mix with green, and grays and browns occasionally, when they occur. Every legitimate means, consistent with truth, should be made to secure this; and by look-

ing for variety in nature, it is surprising how much will appear that otherwise might entirely escape observation.

263. In making finished drawings at leisure, the process may be somewhat different, if high tone and transparency are required. The paper should, first of all, be well toned with warm colour, as ochre and burnt sienna, making the tint stronger where strength and warmth are required in the drawing. It is also useful to blend in a variety of tints while the paper is wet, running them together as near as possible to the places where required. This should be afterwards washed with water, using a large flat brush to remove all superfluous colour: the remaining portion becomes incorporated with the paper, and does not work up into the subsequent tints.

264. Each successive application of colour should be followed by a slight washing, which assists the atmospheric effect, and gives clearness of tint; the last washes alone may be left undisturbed.

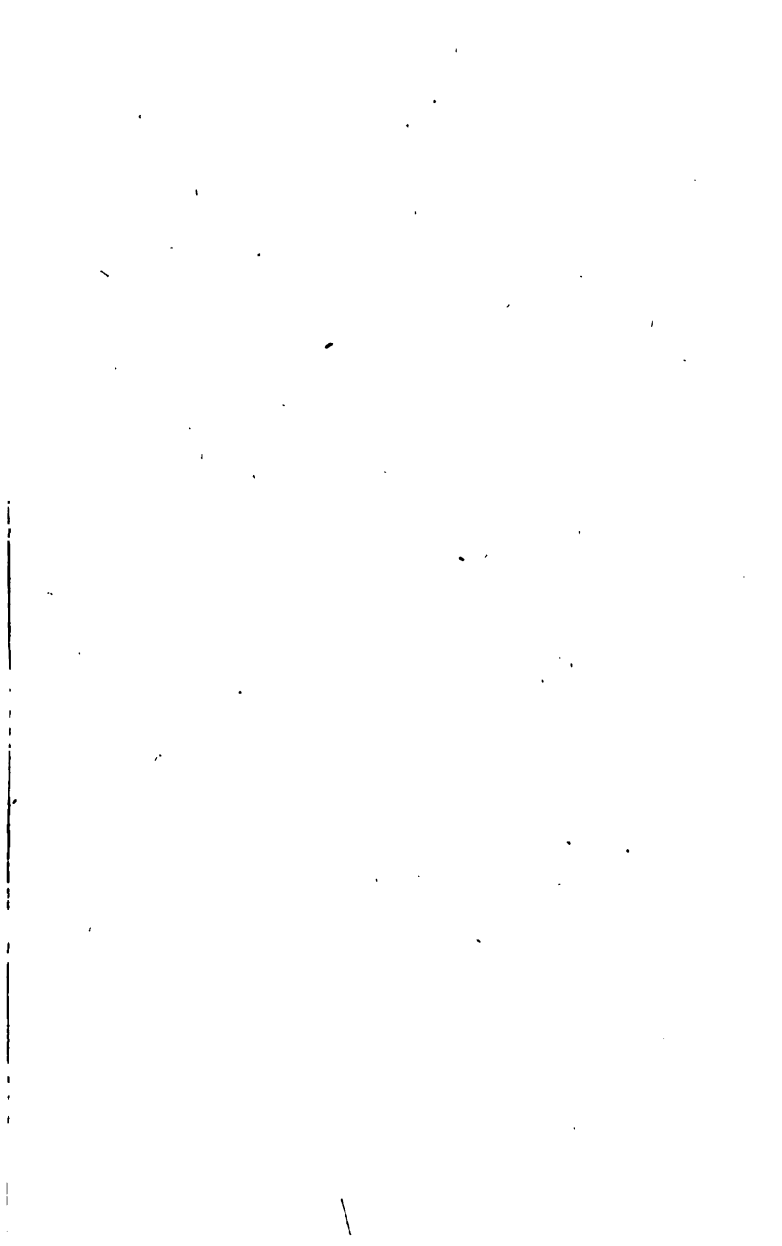
265. As a preparation for this process, the tints are put in stronger than nature, and reduced by washing to their proper strength.

266. A soft sponge is sometimes used to wash away colour and secure softness, but this is only in the sky and extreme distance.

267. Bread is also used to soften tints, as mentioned before in the remarks on sepia-drawings.

268. In working in details of the foreground, much may be done by scraping with the point of a penknife while the colour is wet; and when the whole is dry, by taking out bright sharp lights to represent white flowers, as hemlock, &c.

269. Scraping is also useful in representing the spray and foam of water, and the various sparkling lights that so frequently occur.



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